

17-2194

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**United States Court of Appeals  
for the Federal Circuit**

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TINNUS ENTERPRISES, LLC, ZURU LTD.,

Plaintiffs-Appellees,

v.

TELEBRANDS CORPORATION, BULBHEAD.COM, LLC, BED BATH &  
BEYOND, INC.,

Defendants-Appellants.

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*Appeal from the United States District Court for the Eastern District  
of Texas in No. 6:17-cv-00170-RWS-JDL, Judge Robert Schroeder III.*

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**CORRECTED NON-CONFIDENTIAL OPENING BRIEF  
OF DEFENDANTS-APPELLANTS**

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2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by me is: None.

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party represented by me are: None.

4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court are:

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ADDENDUM

CERTIFICATE OF SERVICE

CERTIFICATE OF COMPLIANCE

CONFIDENTIAL MATERIAL OMITTED:

Confidential material has been deleted from the Addendum attached to this brief (no material has been omitted from the brief itself). *See* Appx23, Appx26-28, Appx35-39. The deleted confidential material comprises: confidential sales, pricing, profits, and other financial information; confidential sales and profit projections; and internal email regarding product design. The materials in the Addendum will be included in the Joint Appendix. Pursuant to Federal Circuit Rule 30(h), Defendants will confer with Plaintiffs regarding whether protected portions need to be protected prior to submission of the Joint Appendix.

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### **STATEMENT OF RELATED CASES**

No other appeal in or from this civil action in the lower court was previously before this or any other appellate court.

The other cases that may potentially be affected by this Court's decision in this appeal are:

1. In *Tinnus Enters., LLC, et al. v. Telebrands Corp. et al.*, 6:15-cv-00551-RC-JDL (E.D. Tex.) (*Zuru I*), the plaintiffs—who are also the Plaintiffs-Appellees in this current appeal—assert U.S. Patent No. 9,051,066, which is the parent of the two patents at issue here, U.S. Patent Nos. 9,242,749 and 9,315,282. The accused products in *Zuru I* are Telebrands' Balloon Bonanza and Battle Balloons products, which are not at issue here. This Court already considered Telebrands' appeal of a preliminary injunction in *Zuru I*, based on the '066 patent. *See Tinnus Enters., LLC v. Telebrands Corp.*, 846 F.3d 1190 (Fed. Cir. 2017). *Zuru I* is currently stayed pending the Patent Owner's appeal of the PTAB's final written decision, which concluded that all claims of the '066 patent are unpatentable as indefinite.

2. In *Tinnus Enters., LLC v. Telebrands Corp.*, No. 17-1726 (Fed. Cir.), the patent owner of the '066 patent, Tinnus—who also owns the '749 and '282 patents at issue in this current appeal—appeals the above-

referenced PTAB final written decision invalidating the '066 patent.

3. In *Tinnus Enters., LLC, et al. v. Telebrands Corp. et al.*, 6:16-cv-00033-RWS-JDL (E.D. Tex.) (“*Zuru I*”), the plaintiffs—who are the Plaintiffs-Appellees in the current appeal—assert the '749 and '282 patents at issue in this current appeal, but against a different product, Battle Balloons. Trial is set for November 13, 2017.

4. In *Tinnus Enters., LLC, et al. v. Wal-Mart Stores, Inc., et al.*, 6:16-cv-00034-RWS-JDL (E.D. Tex.) (the “Retailer Action”), the plaintiffs—who are the Plaintiffs-Appellees in this current appeal—assert the '749 and '282 patents against certain retailers who sold the Battle Balloons product. Trial is set for November 13, 2017. The Retailer Action has been consolidated with *Zuru II*, listed immediately above.

5. In *Tinnus Enters., LLC v. Telebrands Corp.*, Nos. 17-1175, -1760, -1811 (Fed. Cir.), Telebrands and certain of its retailer customers, including Bed Bath & Beyond, appeal from preliminary injunction orders in the Retailer Action and *Zuru II*.

6. In *Zuru Ltd. v. Telebrands Corp.*, Civil Action No. 15-cv-00548-CCC-MF (D.N.J.), the parties assert multiple claims against each other, including Lanham Act, tortious interference and unfair competition claims pertaining to Balloon Bonanza, Battle Balloons and certain patent

infringement claims asserted in the Texas lawsuits described above.

7. In *Tinnus Enters., LLC v. Wal-Mart Stores, Inc., et al.*, 6:17-cv-00361-RWS-JDL (E.D. Tex.), Tinnus, the patent owner, asserts four patents, including the '749 and '282 patents at issue in this current appeal. The defendants are three retailers who are selling the Easy Einstein Balloons product, the same product at issue in this current appeal.

8. In *Telebrands Corp. v. Zuru Ltd.*, Civil Action No. 2:17-cv-04522-CCC-MF (D.N.J.), Telebrands seeks declaratory judgments that the Easy Einstein Balloons product, the same product at issue in this current appeal, does not infringe Zuru's newly issued U.S. Patent No. 9,682,789, which is a continuation of the invalid '066 patent, and that the '789 patent is invalid.

**JURISDICTIONAL STATEMENT**

The United States District Court for the Eastern District of Texas had jurisdiction over the patent infringement actions below under 28 U.S.C. § 1338(a).

This Court has jurisdiction over the district court's June 16, 2017 preliminary injunction order pursuant to 28 U.S.C. § 1292(a)(1) and (c)(1). Telebrands, Bulbhead, and Bed Bath & Beyond, timely appealed to this Court on June 19, 2017.

### **STATEMENT OF THE ISSUES**

Telebrands, Bulbhead, and Bed Bath & Beyond (collectively, “Defendants”) ask the Court to conclude that the district court abused its discretion in finding that Zuru and Tinnus (collectively, “Zuru”) made a clear showing that they are entitled to a preliminary injunction against Telebrands’ Easy Einstein Balloons for alleged infringement of U.S. Patent Nos. 9,242,749 and 9,315,282. This appeal presents the following questions:

1. Whether the district court erred in issuing an injunction before deciding it had proper venue over the claims against Telebrands and Bulbhead, and relatedly, whether the injunction must be vacated because there was no proper venue, as neither Telebrands nor Bulbhead resides in or has a place of business in the Eastern District of Texas;
2. Whether the district court erred in finding no substantial question as to the validity of the ’749 and ’282 patents based on obviousness; and
3. Whether the district court erred in finding Zuru likely to establish that the Easy Einstein Balloons product infringes the ’749 and ’282 patents.



## **STATEMENT OF THE CASE**

### **I. Introduction**

The district court improperly granted a preliminary injunction against the Easy Einstein Balloons product, a toy whose plastic housing can be screwed onto a hose or faucet to permit the filling and sealing of multiple balloons with water. After Zuru accused prior generations of infringement, Telebrands designed this product to include a plug with a valve on the inside of its balloons—a design that the patentee deliberately excluded from the scope of the '749 and '282 patents. The patents require that an “elastic fastener” both *clamp* the containers to tubes that are used to fill the containers and *seal* the containers upon their detachment from the tubes. Appx74 at 6:44-52; Appx86 at 6:40-48. And they explicitly differentiate plugs, which are not claimed, from elastic fasteners, which are claimed. Knowing this, Zuru concocted an argument that the Easy Einstein Balloons’ external PVC cap—which neither clamps nor seals “upon detachment”—meets the functional limitation. The district court nevertheless found that Zuru would likely prevail in establishing that the cap meets the literal language of the claims.

The district court also avoided addressing the threshold issue of venue. The Eastern District of Texas is not a proper venue for this case against Telebrands and Bulbhead. Telebrands, the manufacturer and supplier of the product, is a New

Jersey corporation with no place of business in Texas. Similarly, Bulbhead is a Delaware LLC with its only place of business in New Jersey. Before answering the complaint, Telebrands and Bulbhead promptly moved to dismiss for improper venue. Without deciding that motion, the district court improperly issued the preliminary injunction. Had it considered the motion first, it would have had no choice but to dismiss or transfer for improper venue.

Finally, the '749 and '282 patents are obvious in light of a straightforward obviousness combination that caused the PTAB to initiate PGR proceedings for both patents, after finding it more likely than not that both patents are invalid. Although Defendants cited the PTAB decision, the district court conspicuously did not explain why it disagreed with the PTAB's reasoning. Instead, the court rebutted arguments and prior art combinations that Defendants never asserted.

Because Zuru did not come close to making a "clear showing" that it was entitled to a preliminary injunction, *Winter v. Natural Res. Def. Council, Inc.*, 555 U.S. 7, 22 (2008), this Court should reverse.

## **II. Development of Telebrands' Easy Einstein Balloons Product**

The accused Easy Einstein Balloons products are one of the "legitimate design-around efforts" that "should always be encouraged as a path to spur further innovation." *TiVo Inc. v. EchoStar Corp.*, 646 F.3d 869, 883 (Fed. Cir. 2011) (en banc). Telebrands, a leading marketer of consumer products, created, developed

and supplied Easy Einstein Balloons. Appx2898-2900. Telebrands sought patent protection on the new product and, at the time of the preliminary injunction hearing, had been advised by the Patent Office that key claims had been approved. Appx3865; Appx5560. Bulbhead, an LLC whose only member is Telebrands' founder, sold Easy Einstein Balloons on the Internet; Bed Bath & Beyond is a national retailer that also sold Easy Einstein Balloons.

Telebrands' first-generation toy product for filling and sealing multiple balloons was called Balloon Bonanza. Telebrands began selling Balloon Bonanza in early 2015, before the publication or issuance of any Zuru patent application or patent. Appx4, Appx64, Appx75. Zuru's first patent, the '066 patent, issued in the midst of the summer selling season, on June 9, 2015. Appx2. On December 22, 2015, in *Zuru I (Tinnus Enterprises, LLC, et al. v. Telebrands Corp. et al.*, 6:15-cv-00551-RC-JDL (E.D. Tex.), Zuru obtained a preliminary injunction against Balloon Bonanza. Appx95.<sup>1</sup> On December 30, 2016, the PTAB issued a final written decision finding the '066 patent invalid. *Telebrands Corp. v. Tinnus Enters., LLC*, PGR2015-00018, 2016 WL 7985419, at \*14 (PTAB Dec. 30, 2016). The Balloon Bonanza product, the preliminary injunction against it, and the

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<sup>1</sup> This Court affirmed, using a plain error standard of review because it found that Telebrands did not object to the magistrate judge's validity findings in its report and recommendations. *Tinnus Enters., LLC v. Telebrands Corp.*, 846 F.3d 1190, 1205-07 (Fed. Cir. 2017). That is not an issue here, where the district court judge directly decided the preliminary injunction.

PTAB's decision regarding the '066 patent are not the subject of this current appeal.

In late 2015, Telebrands developed its second-generation balloon product, Battle Balloons. After the Court in *Zuru I* found Battle Balloons to be more than colorably different from the prior Balloon Bonanza product, Appx6, Zuru filed *Zuru II* against Battle Balloons on January 26, 2016, asserting the just-issued '749 patent. *Id.*, Appx64. On April 19, 2016, Zuru amended its complaint to include the recently issued '282 patent. Appx75-86. On October 31, 2016, the district court relied on both patents to preliminarily enjoin Battle Balloons.

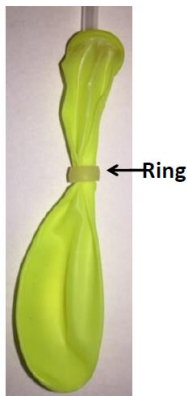


**Battle Balloons  
(Second Generation)**

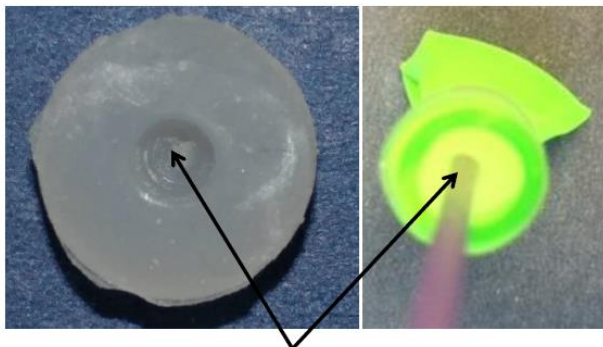
Appx6. Telebrands and Bed Bath & Beyond appealed that preliminary injunction, which is currently before this Court in Case No. 17-1175. The plastic housing (the blue part shown above that connects to the hose or faucet) in the Balloon Bonanza and Battle Balloons products were different in design. But both products used external O-rings to hold individual balloons onto tubes through which water flowed to fill individual balloons. These O-rings, which are very small rubber bands, are readily visible around the necks of the balloons in the Battle Balloons photo above. After the balloons containing water separated from their respective tubes, the same O-rings that had held the balloons to the tubes then sealed the

balloons. Neither Balloon Bonanza nor Battle Balloons is the subject of this appeal.

In late 2016, Telebrands finalized a new, unique design for its third-generation product that eliminates the O-rings that were previously used on the outside of the balloons and instead uses a valve in an internal plug positioned *inside* the neck of each balloon. Appx2899-2900. The valve in the plug opens to permit water to fill the balloon and then closes upon detachment of the plug from the tube, to prevent water from escaping. Telebrands named this new product, “Easy Einstein Balloons.” Appx2900. This is the product that is the subject of the preliminary injunction that is on appeal here. As they did in the district court, Defendants are submitting samples of the Easy Einstein Balloons product for this Court’s inspection. Appx3769.



**Battle Balloons  
(Second Generation)**



**Valve Inside Internal Plug  
Easy Einstein Balloons  
(Third Generation)**

The valve, which can be seen on the actual products but is too small to be seen in the above photographs, is located at the end of a canal in the center of the

internal plug. Appx2817. It is “basically two leafs that come together . . . .” Appx5505-5506 at 97:25-98:1, Appx5533-5534. Because the canal diameter is larger than the tube diameter, the canal itself does not grip or hold the tube extending through it. Appx2817, Appx2900, Appx5517 at 109:18-22, Appx5535. Rather, it is the valve that performs that function. The valve “grips onto the tube, providing a resistive force” that holds the weight of the plug and balloon on the tube. Appx5506 at 98:3-9; *see also* Appx2817-2818, Appx5535-5536.

When a certain force is applied to the balloons—either by gravity, shaking them, or pulling them off—the resistive force of the valve is overcome, the plug slips off the tube (taking the balloon with it), and the valve in the plug closes shut to prevent water from escaping.<sup>2</sup> Appx2818, Appx5506, Appx5515. As is the case with all balloon filling products, leakage will eventually result in balloon deflation. But without the internal plug and valve, Easy Einstein Balloons would not function at all—the balloon would have nothing to attach to, it could not be filled, and water would not stay inside it. *See* Appx5522 at 114:7-10.

To help maintain the plug in the proper position inside the balloon neck, a hollow, cylindrical PVC cap, pictured below, is placed around the outside of the balloon neck. Appx2818.

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<sup>2</sup> To be clear, even after the valve shuts, some water may still drip out—both with and without the PVC cap. Appx5507-5508 at 99:24-100:7.



### **Easy Einstein's PVC Cap**

If the PVC cap is removed, Easy Einstein Balloons will still perform the same functions: after the balloons are filled with water, the inner plugs detach from the tubes and the valves close to keep the water from escaping. Appx2818-2823; *see also* Appx7144-7150 (videos submitted on media). But without the PVC cap, there can sometimes be slightly more leakage between the outer circumference of the internal plug and the balloon neck. Appx5436 at 28:22-24. If the PVC cap is removed from the balloon by hand, this leakage can result from the operator accidentally causing the internal plug to shift (*e.g.*, causing the balloon to “pull[] . . . back a little bit off of the edge of the plug”). Appx5509. But one thing is clear and undisputed—the valve inside of the inner plug closes when the tube is removed from the plug, regardless whether the PVC cap is present. Appx2823 ¶43; Appx5515 at 107:1-6; Appx5533-5534 at 125:22-126:10; *see also* Appx2819-2820 ¶¶30-31.

### **III. Zuru's '749 and '282 Patents and the Prior Art**

The '749 and '282 patents are the subject of both this appeal<sup>3</sup> and the pending appeal in Case No. 17-1175 involving the Retailer Case and *Zuru II*. In this case, Zuru alleges that the Easy Einstein Balloons infringe all claims of the '749 and '282 patents. The '749 patent has only one claim; the '282 patent has one independent claim and two dependent claims. All are *apparatus* claims that use *functional* claim language. For purposes of the issues relevant to the preliminary injunction, the district court below treated the '749 patent as identical to the '282 patent. Appx19-24.

#### **A. The Patents Claim an Apparatus with Elastic Fasteners, for Simultaneously Filling and Sealing Containers with Liquids or Gasses**

At a high level, the claims recite an apparatus for simultaneously filling and sealing containers, such as balloons, with fluids, Appx86 at6:51-52, which (a) includes a housing with an inlet and multiple tubes protruding from that housing to which containers are clamped by elastic fasteners, *id.* at 6:36-43, (b) wherein the elastic fasteners allow the containers to detach when the containers are at least partially filled with fluid or the housing is shaken. *id.* at 6:47-51. The elastic fasteners must also seal the balloons. Appx74, Appx86. The patents explain that

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<sup>3</sup> Although Zuru asserted two other patents in the lawsuit below, U.S. Pat. Nos. 9,527,612 and 9,533,779, they were not the subject of the preliminary injunction.



“elastic fasteners” are a type of “elastic valve[]” that can be used to “control the flow of fluids . . .” Appx84 at 2:58-62. Although the patents further explain that an “internal or external plug[] affixed to the neck[] of [a] containers . . . .” is a different type of “elastic valve,” Appx85 at 3:1,<sup>4</sup> the patents conspicuously do not claim plugs.

Specifically, during prosecution of the '749 and '282 patents, the applicant originally sought claims directed to all types of valves, including plugs. Appx2636-2637, Appx2660-2666. But the applicant was forced to relinquish its broad “valve” claims after the examiner rejected them during prosecution of the '749 patent. Appx2643, Appx2658, Appx2669-2670.

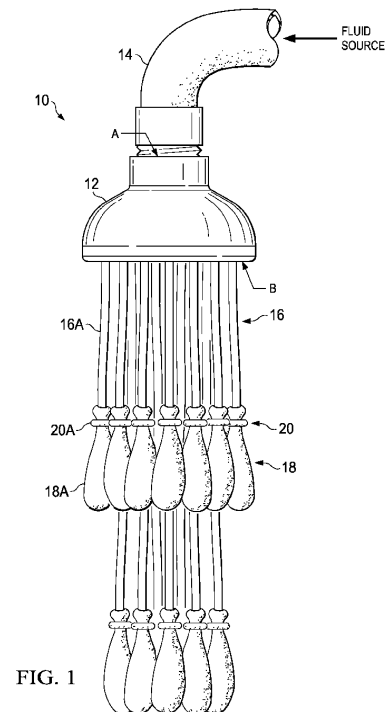


FIG. 1

The patent teaches that elastic fasteners include rubber bands or O-rings. Appx84 at 2:60-62. Significantly, the patents do not differentiate between the O-rings/rubber bands that are described in the patent and those used in the prior art. Nor do the patents suggest that an elastic fastener must have specific dimensions or quantitative strength metrics. *See* Appx84.

The patents state that the claimed fastener can be used with different types of

<sup>4</sup> The discussion of plugs in the specification was not part of the Applicant's original provisional patent application. The Applicant added this language later, after he had seen the Zorbz water balloons, which are individual balloons with internal plugs used to seal the balloons. Appx2359-2360.

fluids (*e.g.*, gases and/or liquids). *See* Appx72 at 1:26-27, Appx73 at 3:17-19, Appx84 at 1:28-29, Appx85 at 3:22-24. Specifically, the patents teach that elastic fasteners hold containers (*e.g.*, balloons) on tubes while the tubes are filled with “fluids,” which can include gases, such as “gaseous . . . medications,” and liquids, such as urine and blood. Appx72 at 1:26-27; *see also* Appx72 at 2:41-42, Appx73 at 3:17-19. After reaching a desired size, the containers can be removed by pulling them off by hand, by shaking them off, or by their simply falling off. Appx73 at 3:46-65, 4:57-59; Appx85 at 3:51-4:3, 4:63-67. The patents acknowledge that the shape of the housing is unimportant to this functionality. Appx74 at 6:17-24; Appx86 at 6:17-24.

The claims of the ’749 and ’282 patents differ from the claims of the parent ’066 patent in one significant respect: the ’066 patent claims require that shaking a container substantially filled with water must actually *cause* the container to detach. In contrast, the ’749 and ’282 patents merely provide that detachment is *permitted* upon the container being at least partially filled with “fluid” and/or shaken. *Compare* Appx74 and Appx86 *with* Appx2441-2442.

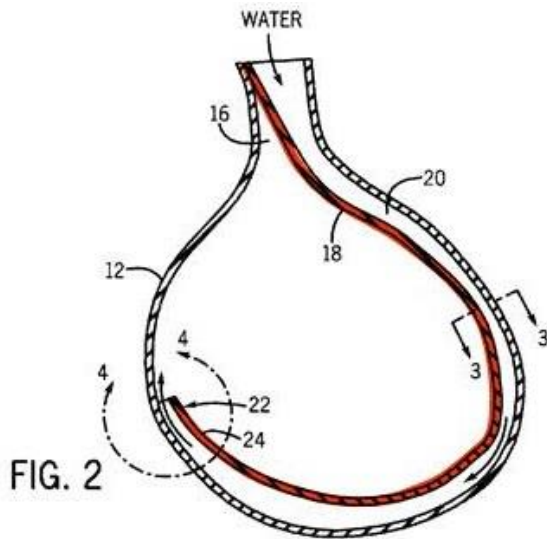
**B. The PTAB Found that the ’282 Patent and the ’749 Patent are More Likely Than Not Invalid As Obvious**

Like the Zuru patents, the prior art recognized that, after balloons or other containers are filled with a fluid, tying or closing the containers can be difficult

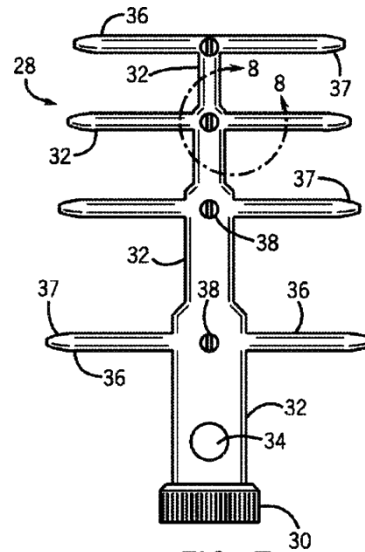
and/or tedious, particularly for children. Appx2884 ¶¶3-4, Appx2894 at 1:34-57. Thus, the prior art disclosed automatically sealing or closing containers after they are filled with a fluid, including with either (1) an elastic ring (*e.g.*, an O-ring or rubber band), or 2) an internal elastic membrane in a balloon. These prior art teachings caused the PTAB to institute PGR proceedings on February 21, 2017, concluding that the PGR Petitioner “is more likely than not” to “prevail in showing that the challenged claims” of the ’749 and ’282 patents are unpatentable. Appx2474, Appx2506, Appx2510, Appx2546.

The core prior art combination in both PGR proceedings is the same one that the Defendants urged below in opposing the preliminary injunction: a simple and predictable combination of an apparatus used to simultaneously fill up several water balloons at the same time (Saggio) with a teaching that O-rings can be used to clamp balloons on the tubes and automatically seal them when they detach (Donaldson). Appx2502-2503.

Saggio discloses a system for filling multiple self-sealing water balloons at once. Appx2881 at Fig. 2; Appx2883 at Fig. 7, Appx2884 ¶ 7.



**Saggio's Specialized Balloon (red highlighting added)  
(Appx2881)**



**FIG. 7  
Saggio Fig. 7 (Appx2883)**

Saggio's multi-balloon filling apparatus includes a water supply fitting for connecting to a hose, a main conduit, lateral conduits, and tips to the lateral conduits. Appx2883 at Fig. 7; Appx2884-2885 at ¶¶ 22-23. The tips are designed to engage balloons' necks, allowing a large number of balloons to be filled simultaneously. Appx2885 ¶ 24. Saggio also teaches a self-sealing water balloon with "a one-way valve . . . inside the balloon that allows water to enter the balloon but not escape it." Appx2883 at Fig. 5, Appx2884 ¶ 7. Water flows into the Saggio water balloon through a channel between a membrane and the outer wall of the balloon. The pressure of water in the balloon presses the membrane against the wall of the balloon, closing the channel.

Donaldson discloses a simpler means for automatically sealing a balloon, an

O-ring 20 that cinches the balloon material in the neck together, Appx2888:

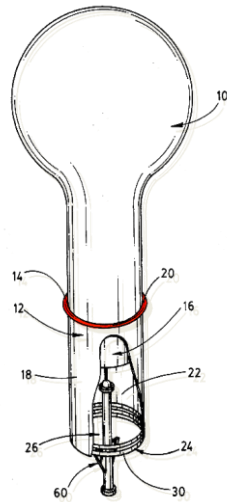


FIG. 1

**Donaldson Fig. 1**  
(red highlighting added to O-ring 20)  
(Appx2889)

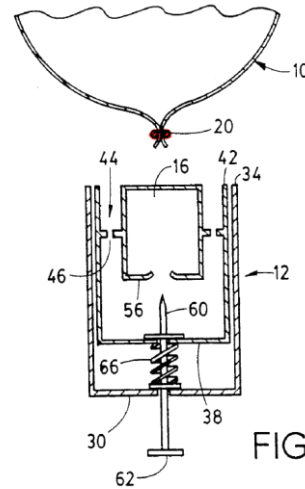


FIG. 5

**Donaldson Fig. 5**  
(red highlighting added to O-ring 20)  
(Appx2891)

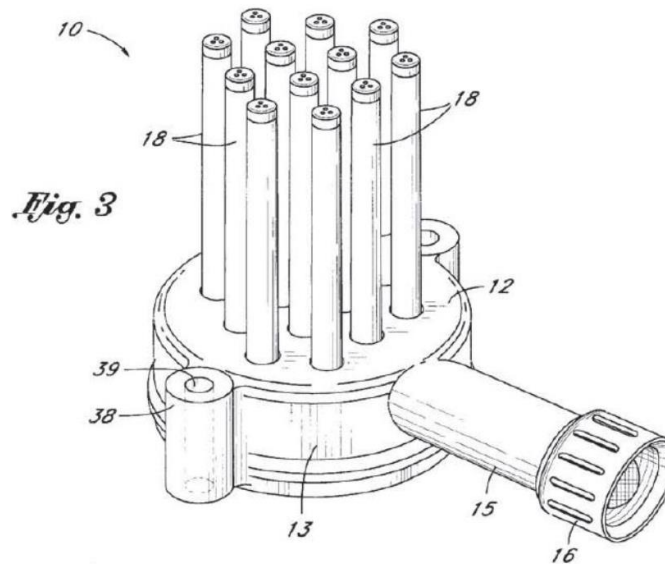
The key teachings in Donaldson are an O-ring that:

- initially clamps a balloon to a tube;
- detaches upon at least partially filling the balloon with fluid; and
- automatically seals the balloon after the balloon detaches from the tube.

Appx2888 at Abstract; Appx2889 at Fig. 1; Appx2891 at Fig. 5; Appx2894 at 1:64-68 and 2:39-41; Appx2895-2896 at 4:65-5:10. Although not relevant to the obviousness combination, Donaldson also teaches a balloon inflating device consisting of a pressurized fluid (gas) source that can be used to inflate the balloon.

The PTAB found that the prior art suggested using O-rings (as taught in

Donaldson) to hold balloons on multiple balloon filling devices, instead of using Saggio's more complex internal membrane. Appx2502-2503; *see also* Appx2499-2500. The PTAB found that this combination rendered claim 1 of the '749 patent obvious. Appx2503. The PTAB also found that instead of using Saggio's cylindrical structure to deliver the fluid to the balloons, it would have been obvious to use housings with other shapes, such as the flat-faced design of Cooper (Appx2872), which has flexible tubes close to one another. Appx2494-2501; Appx2530-2541.



**Cooper Fig. 4 (Appx2874)**

This simple mechanical substitution with expected results satisfies each claim of the '749 and '282 patents. Cooper discloses a lawn sprinkler that may be attached with a female connector to a garden hose. Appx2873 at Fig. 1, Appx2876 at 2:20-26. The sprinkler includes a main housing, to which water is supplied from

an inlet. Appx2874 at Fig. 4, Appx2876 at 2:22-34. The housing then contains several flexible tubes as outlets. The “tubes may be bent . . . by the user into any desired curve.” Appx2877 at 3:20-22.

### **C. Zuru’s Expert’s Admissions Regarding the Prior Art**

It is unsurprising that the PTAB found the asserted claims are likely to be obvious. Indeed, even Zuru’s expert admitted in his deposition that the basic features in the claims were well known. For example, he admitted that Donaldson teaches an elastic fastener/O-ring that:

- is structurally the same as the O-ring disclosed in the patents, Appx3778 at 295:6-8, Appx3786 at 329:5-10;
- automatically seals the balloon after detachment, Appx3778 at 295:9-12 and 295:19-25;
- detaches after the balloon is filled with fluid, Appx3779 at 300:18-21; and
- detaches when the surface on which it is seated accelerates away from it, Appx3779 301:1-4 and 301:20-302:7

Zuru’s expert also admitted that if one of ordinary skill in the art is taught—as Donaldson teaches—to use an O-ring to hold a balloon on a tube and to seal upon detachment, the skilled artisan would have understood:

- how to implement that teaching, Appx3777 at 292:7-13 and 294:10-

25;

- that the tightness of O-ring will influence whether balloon will fall off when filled or shaken, *id.* at 294:3-9;
- that the O-ring could potentially fall off when balloon filled with fluid, *id.* at 292:20-293:22; and
- that the O-ring and balloon could potentially detach when shaken, *id.* at 293:23-294:2.

#### **IV. Venue-Related Facts**

One month after PTAB initiated the '749 and '282 patent PGRs, Zuru filed this lawsuit, as well as an *ex parte* request for a TRO and preliminary injunction. Appx87, Appx202. Zuru correctly identified New Jersey as the principal place of business for Telebrands and Bulbhead, and New Jersey and Delaware as the respective states of their legal formations. Appx88 ¶¶ 4-5; Appx6727-6728; Appx7115-7116; *see also* Amended Complaint, Appx5966 ¶¶ 4-6. Neither Telebrands nor Bulbhead has a place of business in the Eastern District of Texas. Appx6727 ¶ 4; Appx6728 ¶ 5; Appx7115-7116. In addition, neither has any employee, contractor, or facility in the district. Appx7116 ¶¶ 6-7, 10-11.

On March 27, Defendants responded to Zuru's motion for TRO, as they were required to do lest the TRO be granted as unopposed. Appx1312. But Defendants Telebrands and Bulbhead expressly stated that, by entering an



appearance and contesting the motion, they were not waiving their right to contest venue if the Supreme Court changed applicable patent venue law in *TC Heartland*. Appx1314 n.1. Zuru did not contest the reservation of rights, and the district court did not address it.

On March 29, the district court denied Zuru's motion for a TRO, but gave Zuru the opportunity to file new papers in support of their preliminary injunction request, which they did. Appx1830, Appx1844. The district court held a preliminary injunction hearing in Texarkana, Texas on April 12. Appx1.

On April 25, in their first response to the complaint, Telebrands and Bulbhead moved to dismiss for improper venue, contingent on the outcome of the Supreme Court's pending *TC Heartland* decision. Appx5597-5599. After Zuru responded with an amended complaint, the district court denied the motion to dismiss as moot, without prejudice to the Defendants' filing a second motion to dismiss, against the amended complaint. Appx6643.

On May 19, the district court issued an opinion stating that it intended to enter a preliminary injunction order, and directed the parties to file a proposed bond amount and preliminary injunction order by May 26. Appx1.

On the next business day, May 22, the Supreme Court overruled longstanding Federal Circuit law regarding the patent-specific venue statute, 28 U.S.C. § 1400(b). *TC Heartland LLC v. Kraft Foods Grp. Brands LLC*, 137 S. Ct.

1514, 1517 (2017).

On May 26, in their first response to the amended complaint, Defendants Telebrands and Bulbhead moved to dismiss for improper venue, as well as to stay entry of a preliminary injunction until after the district court addressed the venue issue. Appx6669, Appx6706. Defendants' stay motion argued that it would be improper for the district court to issue an injunction if venue is improper. Appx6707-6708. On June 9, Zuru filed its oppositions, Appx6944 and Appx6956, and on June 15, Defendants filed their reply briefs, Appx7090, Appx7122. Defendants' reply in support of the motion to stay cited Supreme Court and Fifth Circuit cases establishing that "reversal is necessary" in cases "erroneously litigated in a district" where there is improper venue. *E.g., Lexecon Inc. v. Milberg Weiss Bershad Hynes & Lerach*, 523 U.S. 26, 41 (1998).<sup>5</sup>

Nevertheless, on June 16, the Court denied the motion to stay and issued the preliminary injunction anyway, without deciding Defendants' motion to dismiss or otherwise determining that venue was proper. Appx31. Even though Zuru had already filed their opposition and Defendants had already filed their reply, the

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<sup>5</sup> Defendants also cited *Hendricks v. Bank of Am., N.A.*, 408 F.3d 1127, 1135 (9th Cir. 2005), which made clear that "the court would lack authority to grant [injunctive] relief if . . . venue was improper because the forum-selection clause precluded preliminary injunctive relief" and that therefore "the district court had to consider the [venue and jurisdiction] defenses as 'a logical predicate to' its preliminary injunction order." *Id.*

district court declined to rule on Defendants’ venue request because, the court said, it is “based on a complex set of motions” that “are in the early stages of briefing.” Appx32.

### **SUMMARY OF THE ARGUMENT**

The district court below made three fatal errors, each of which requires reversal of the preliminary injunction. First, the district court entered an injunction despite being an indisputably improper venue in light of the Supreme Court’s *TC Heartland* decision, which Defendants promptly brought to the district court’s attention long before it entered the preliminary injunction. Because the district court lacked authority, that preliminary injunction was improper. Second, the district court found no substantial question of invalidity—even though the district court provided no valid reason why the proposed obviousness combination did not create a substantial question of validity, and the PTAB found the identical obviousness combination to render *the same patents* more likely than not invalid. Finally, the district court’s infringement analysis erroneously ignored key language in the patent claims—reading out “to automatically seal . . . *upon detachment*” claim language and incorrectly finding that because the external PVC cap allegedly exerts a restricting force on a plug, it necessarily “clamps” a balloon to a tube. Each of these three errors is an independent ground for reversal.

## **ARGUMENT**

### **I. Standard of Review**

“[I]njunctive relief [i]s an extraordinary remedy that may only be awarded upon a clear showing that the plaintiff is entitled to such relief.” *Winter*, 555 U.S. at 22. “A plaintiff seeking a preliminary injunction must establish that he is likely to succeed on the merits, that he is likely to suffer irreparable harm in the absence of preliminary relief, that the balance of equities tips in his favor, and that an injunction is in the public interest.” *Id.* at 20.

On appeal from the grant of a preliminary injunction, appellate courts “review the District Court’s legal rulings *de novo* and its ultimate decision to issue the preliminary injunction for abuse of discretion.” *Gonzales v. O Centro Espirita Beneficente Uniao do Vegetal*, 546 U.S. 418, 428 (2006). A court abuses its discretion if it commits “a clear error of judgment in weighing the relevant factors or exercise[s] its discretion based on an error of law or clearly erroneous fact finding.” *Wind Tower Trade Coal. v. United States*, 741 F.3d 89, 95 (Fed. Cir. 2014) (internal citation and quotation marks omitted); *see also Cooter & Gell v. Hartmarx Corp.*, 496 U.S. 384, 405 (1990) (“A district court would necessarily abuse its discretion if it based its ruling on an erroneous view of the law or on a clearly erroneous assessment of the evidence.”).

## **II. The District Court Lacked Authority To Enter The Preliminary Injunction After *TC Heartland*.**

### **A. Venue is a Threshold Determination that Must be Determined Before Proceeding on the Merits**

The district court committed legal error in issuing the injunction before it decided whether it was the proper venue to decide the patent claims against Telebrands and Bulbhead. *See Hendricks*, 408 F.3d at 1135 (holding that because “the court would lack authority to grant [injunctive] relief if . . . venue was improper,” “the district court had to consider the [venue and jurisdiction] defenses as ‘a logical predicate to’ its preliminary injunction order.”); *Chrysler Credit Corp. v. Country Chrysler, Inc.*, 928 F.2d 1509, 1515 n.3 (10th Cir. 1991) (“the transferor court lacks venue and *must* transfer the action in order for it to proceed.”) (emphasis in original); *Stuart v. Stuart*, No. 3:12-CV-159 CSH, 2012 WL 370089, at \*2 (D. Conn. Feb. 3, 2012) (“Venue in a particular district must be proper under governing law for the court to be empowered to act. . . . For the purpose of TRO analysis, venue in this Court must manifestly be proper”; finding venue is improper and refusing to grant TRO or PI as a result).

Venue is not a mere technicality; it is a vital protection that Congress has provided for defendants. If a case is “erroneously litigated in a district” due to improper venue, “reversal is necessary . . . .” *Lexecon*, 523 U.S. at 41; *see also Olberding v. Illinois Central R. Co.*, 346 U.S. 338, 340 (1953) (reversing judgment

based upon improper venue); *Gogolin & Stelter v. Karn's Auto Imports, Inc.*, 886 F.2d 100, 104 (5th Cir. 1989) (“The remedy for this error [in venue] is to vacate [the judgment for damages] and remand the case with instructions that the district court transfer to a proper venue or dismiss it, in accordance with 28 U.S.C. § 1406(a).”); *United States v. Maryland Casualty Co.*, 573 F.2d 245, 247-49 (5th Cir. 1978) (reversing grant of summary judgment due to improper venue and remanding to determine whether the claim should be transferred or dismissed under 28 U.S.C. § 1406(a)).<sup>6</sup>

Because the district court was an improper venue and venue was not waived, the district court’s preliminary injunction order must be reversed.

**B. *TC Heartland* Limited Venue To Where A Defendant Resides Or Has A Regular And Established Place Of Business.**

The Supreme Court’s May 22 ruling in *TC Heartland LLC v. Kraft Foods Grp. Brands LLC*, 137 S. Ct. 1514, 1517 (2017), rendered the Eastern District of Texas an improper venue. *TC Heartland* held that the general venue provisions of 28 U.S.C. § 1391 do not alter the meaning of the more demanding patent-specific venue provisions of 28 U.S.C. § 1400(b). The Supreme Court explained

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<sup>6</sup> Proper venue is particularly important where, as with § 1400(b), Congress has provided additional protection to defendants in the form of a limited venue statute. *See, e.g., Maryland Casualty*, 573 F.2d at 247-49 (holding that where Congress has enacted a specific venue statute it “must be strictly construed, even more so than in the case of a general statute,” and citing the patent venue statute as an example).

“Congress designed § 1400(b) to be ‘complete, independent and alone controlling in its sphere.’” *TC Heartland*, 137 S.Ct. at 1519 (quoting *Fourco Glass Co. v. Transmirra Prods. Corp.*, 353 U.S. 222, 228 (1957)). Section 1400(b) provides that “[a]ny civil action for patent infringement may be brought in the judicial district where the defendant resides, or where the defendant has committed acts of infringement and has a regular and established place of business.”

**C. Neither Telebrands Nor Bulbhead Resides Or Has A Regular And Established Place Of Business In The Eastern District of Texas.**

Neither Telebrands, a corporation, nor Bulbhead, an LLC, meets either prong of the test in Section 1400(b), because neither defendant (a) “resides” or (b) “has a regular and established place of business” in the Eastern District of Texas. Appx6727-6728; Appx7115-7116; Appx7118.

Because Telebrands is incorporated in New Jersey, it “resides” only in the District of New Jersey. That is because “a domestic corporation ‘resides’ only in its State of incorporation for purposes of the patent venue statute,” *TC Heartland*, 137 S. Ct. at 1517. Bulbhead similarly “resides” only in the District of New Jersey, where its principal (indeed, sole) place of business is located. Appx6728. Specifically, the well-established rule prior to *VE Holdings* was that venue for an unincorporated association is its principal place of business. *Sperry Products, Inc. v. Association of American Railroads*, 132 F.2d 408 (2d Cir. 1942) (L. Hand, J.).

*See* Charles A. Wright *et al.*, *Federal Practice & Procedure* § 3823, at 142 & n. 41 (1st ed. 1976) (citing *Sperry* as the controlling law for determining the residence of an association for patent venue, and citing no contrary authority); 8 Donald S. Chisum, *Chisum on Patents* §21.02[2][c] (“The residence of an unincorporated association or partnership is its principal place of business.”). And even if one hypothetically were to consider the residence of Bulbhead’s sole member, Mr. Khubani (New Jersey), or the state in which Bulbhead is organized (Delaware), Bulbhead still would not reside in the Eastern District of Texas. Appx6728.

Finally, neither Telebrands nor Bulbhead has any place of business, much less a “regular and established place of business” in the Eastern District of Texas, either. Appx6726 ¶¶ 4-5. Therefore, the Eastern District of Texas is an improper venue for Telebrands and Bulbhead.<sup>7</sup>

#### **D. Telebrands and Bulbhead Timely Asserted Their Venue Defense**

Telebrands and Bulbhead made clear from the very beginning of this case that they contest venue if the Supreme Court changed the law to permit them to do so. On March 27, in their first filing seven days after the complaint (an opposition to Zuru’s motion for a TRO), Telebrands and Bulbhead expressly notified the court that, by entering an appearance, they “do not concede” venue, and that they

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<sup>7</sup> Bed Bath & Beyond does not contest venue.



specifically reserved their right to contest venue in the district court if the Supreme Court changed the law in *TC Heartland*. Appx1312. Defendants could hardly have acted earlier, or been clearer. Zuru did not contest the reservation of rights and the district court did not address it. Any argument that defendants were required to use different words to assert their improper venue argument before *TC Heartland* is frivolous, and ignores that a direct venue challenge was clearly barred by the long-settled law of this Circuit. Moreover, as soon as *TC Heartland* issued, Telebrands and Bulbhead filed timely motions to dismiss under Rule 12. There can be no serious argument that Telebrands and Bulbhead were less than timely.

**E. TC Heartland Was a Change in Law that Made an Unavailable Venue Defense Available**

Although Defendants raised their venue objection almost two months before *TC Heartland* was decided, they were not required to have done so. For the preceding 27 years, *VE Holding Corp. v. Johnson Gas Appliance Co.*, 917 F.2d 1574 (Fed. Cir. 1990), *cert. denied*, 499 U.S. 922 (1991), had definitively precluded any improper venue defense for defendants like Telebrands and Bulbhead. *See, e.g., In re TC Heartland LLC*, 821 F.3d 1338, 1341, 1345 (Fed. Cir. 2016), *rev'd on other grounds*, 137 S. Ct. 1514 (2017) (“As a panel, we are bound by the prior decisions of this court . . . . Heartland’s arguments are foreclosed by our long standing precedent.”). Because an improper venue defense

was not “available,” it was also not subject to waiver. As the Supreme Court has stated, “an effective waiver must . . . be one of a *known* right or privilege.” *Curtis Publishing Co. v. Butts*, 388 U.S. 130, 142-43 (1967) (internal quotation marks omitted) (emphasis added) (“[T]he mere failure to interpose such a defense prior to the announcement of a decision which might support it cannot prevent a litigant from later invoking such a ground. . . .”). This rule has been widely recognized by federal courts across the country.<sup>8</sup>

A defense is “available” only if there is a viable legal basis for the defense under applicable law. As the D.C. Circuit has stated, “The decisional law indicates that a defense is unavailable if its legal basis did not exist at the time of the answer or pre-answer motion.” *Chatman-Bey v. Thornburgh*, 864 F.2d 804, 813 n.9 (D.C.

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<sup>8</sup> See, e.g., *Forshey v. Principi*, 284 F.3d 1335, 1356 (Fed. Cir. 2002) (“[D]ecision of an issue not decided or raised below is permitted when there is a change in the jurisprudence of the reviewing court or the Supreme Court after consideration of the case by the lower court.”); *Brown v. M&M/Mars*, 883 F.2d 505, 513 (7th Cir. 1989) (“Given the clear law in this circuit at the time of trial, it would have been pointless to submit a different instruction.”); *Holland v. Big River Minerals Corp.*, 181 F.3d 597, 605 (4th Cir. 1999) (noting exception to waiver rule when there has been “an intervening change in the law recognizing an issue that was not previously available”); *GenCorp, Inc. v. Olin Corp.*, 477 F.3d 368, 374 (6th Cir. 2007) (same); *Chatman-Bey v. Thornburgh*, 864 F.2d 804, 813 n.9 (D.C. Cir. 1988) (“Rule 12(g), Fed. R. Civ. P., provides, sensibly, that a defense may be waived only if ‘available’ at the time of the answer or pre-answer motion.”); *Glater v. Eli Lilly & Co.*, 712 F.2d 735, 738 (1st Cir. 1983) (“[D]efendants do not waive the defense of personal jurisdiction if it was not available at the time they made their first defensive move.”); *Dow Chemical Co. v. Nova Chemicals Corp. (Canada)*, 803 F.3d 620, 629 (Fed. Cir. 2015) (“[t]he change in law exception applies whether the change in law occurs while the case is before the district court or while the case is on appeal.”); *Miller v. Drexel Burnham Lambert, Inc.*, 791 F.2d 850, 854 (11th Cir. 1986) (“This circuit does not require a litigant to engage in futile gestures merely to avoid a claim of waiver.”).

Cir. 1988) (citing *Holzsgager v. Valley Hosp.*, 646 F.2d 792, 796 (2d Cir. 2009)), for the proposition that a defense is unavailable if it is barred by the law of the circuit). Thus, an intervening change in the law—such as a Supreme Court decision reversing settled, controlling circuit authority—renders a previously unavailable defense newly “available.” See, e.g., *Gucci Am., Inc. v. Weixing Li*, 768 F.3d 122, 135-36 (2d Cir. 2014) (holding that defendant did not waive its personal jurisdiction defense when, at the time, the “argument that the court lacked jurisdiction over [the] defendant would have been directly contrary to controlling precedent in this Circuit,” and finding that Supreme Court decision overruling such precedent made available a new defense). This well-recognized “intervening-change-in-law exception” to the waiver rule “exists to protect those who, despite diligence, fail to prophesy a reversal of established adverse precedent.” *GenCorp*, 477 F.3d at 374.

Here, *TC Heartland* is a classic “reversal of established adverse precedent.” *Id.* It mirrors *Daimler AG v. Bauman*, 571 U.S. 20 (2014), which the Second Circuit held to be an intervening change of law with respect to personal jurisdiction. See *Gucci*, 768 F.3d at 136. Before *Daimler*, “a foreign bank with a branch in New York” would have been subject to general personal jurisdiction because, by virtue of “the activity of its New York branch, it engaged in a ‘continuous and systematic course of doing business in New York.’” *Id.* By

limiting general jurisdiction to a “place of incorporation or . . . principal place of business” *only*, *Daimler* reversed “controlling precedent in this Circuit” and made a previously unavailable personal jurisdiction defense suddenly available to the *Gucci* defendants, who were therefore held to have timely moved to dismiss even though their *motion to dismiss for lack of personal jurisdiction came only on appeal*. *Id.* at 135 (“Although the Bank appeared in the district court and did not argue there that the court lacked personal jurisdiction, we also conclude that its objection to the exercise of general jurisdiction has not been waived.”).

A district court recently addressed whether, as Telebrands and Bulbhead argue here, *TC Heartland* was a change in law that made available a venue defense for patent infringement defendants that had been unavailable for the prior 27 years; or whether, as Zuru argued below, the venue defense had actually been available since 1957, when the Supreme Court decided *Fourco. Westech Aerosol Corp. v. 3M Co.*, No. C17-5067-RBL, 2017 WL 2671297 (W.D. Wa. June 21, 2017). That district court unequivocally rejected the plaintiffs’ waiver argument, concluding:

*TC Heartland* changed the venue landscape. For the first time in 27 years, a defendant may argue credibly that venue is improper in a judicial district where it is subject to a court’s personal jurisdiction but where it is not incorporated and has no regular and established place of business. Defendants could not have reasonably anticipated this sea change, and so did not waive the defense of improper venue by omitting it from their initial pleading and motions.

*Id.* at \*2. The district court therefore permitted the defendant to amend its motion to dismiss to add a venue defense.

In the district court below, Zuru relied on the unpublished memorandum opinion in *Cobalt Boats LLC v. Sea Ray Boats, Inc.*, No. 2:15-cv-00021-HCM-LRL, Dkt. 298 (E.D. Va. June 7, 2017), to argue that *TC Heartland* merely established that (a) the Federal Circuit erred when it held in *VE Holdings* that the 1988 amendments to 28 U.S.C. § 1391 had overruled the Supreme Court’s 1957 decision in *Fourco Glass Co. v. Transmirra Prods. Corp.*, 353 U.S. 222 (1957) and therefore (b) that *Fourco* has been the law all along. Although a panel of this Court declined to take the extraordinary step of reversing *Cobalt* via mandamus, Judge Newman’s dissent stated that “[t]here is little doubt that the Court’s decision in *TC Heartland* . . . was a change in the law of venue.” *In re: Sea Ray Boats, Inc.*, No. 2017-24, 2017 WL 2577399, at \*1 (Fed. Cir. June 9, 2017) (Newman, J. dissenting) (emphasis added).

Judge Newman is clearly correct. That the Supreme Court decided—27 years after *VE Holdings*—that this Court had erred, does not mean that district courts had been free to disregard *VE Holdings* during those 27 years:

A district judge may not respectfully (or disrespectfully) disagree with his learned colleagues on his own court of appeals who have ruled on a controlling legal issue . . . . Binding authority within this regime cannot be considered and cast aside; it is not merely evidence of what the law is. Rather, caselaw on point *is* the law. If a

court must decide an issue governed by a prior opinion that constitutes binding authority, the later court is bound to reach the same result, even if it considers the rule unwise or incorrect. Binding authority must be followed unless and until overruled by a body competent to do so.

*Hart v. Massanari*, 266 F.3d 1155, 1170 (9th Cir. 2001) (emphasis in original). In this Circuit, “[p]anel opinions are, of course, opinions of the court and may only be changed by the court sitting en banc.” *Robert Bosch, LLC v. Pylon Mfg. Corp.*, 719 F.3d 1305, 1316 (Fed. Cir. 2013) (en banc). A court “may not any more disregard the earlier panel’s opinion than it may disregard a ruling of the Supreme Court.” *Hart*, 266 F.3d at 1171.

That *VE Holdings* turned out to be wrong about 28 U.S.C. § 1400(b) does not retroactively make it any less binding while it was controlling. Telebrands and Bulbhead exhibited ample “due diligence,” *GenCorp*, 477 F.3d at 374, and “conscientiousness,” *Hawknet, Ltd. v. Overseas Shipping Agencies*, 590 F.3d 87, 91 (2d Cir. 2009).<sup>9</sup> That suffices; the “doctrine of waiver demands conscientiousness, not clairvoyance, from parties.” *Id.*, 590 F.3d at 91-92.

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<sup>9</sup> As in *Gucci*, the *Hawknet* defendant moved to dismiss for lack of personal jurisdiction while the case was on appeal, based on a recent appellate ruling. The Second Circuit rejected the plaintiff’s argument that defendant waived its right to contest personal jurisdiction because it did not raise the argument below. 590 F.3d at 91-92. It explained that an earlier “argument that the court lacked jurisdiction over defendant would have been directly contrary to controlling precedent in this Circuit.” *Id.* at 92.

### **III. The District Court Erred In Finding A Likelihood Of Success On The Merits.**

“Vulnerability is the issue at the preliminary injunction stage . . . .”

*Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1359 (Fed. Cir. 2001). If Defendants assert an invalidity or non-infringement defense that Zuru “cannot prove ‘lacks substantial merit,’ the preliminary injunction should not issue.” *Id.* at 1350-51.

#### **A. The District Court Erred In Finding There Was No Substantial Question Of Obviousness For The Patents-In-Suit.**

There can be no doubt that the ’749 and ’282 patents are *vulnerable* to a finding of invalidity. *Amazon.com*, 239 F.3d at 1359 (“Vulnerability is the issue at the preliminary injunction stage . . . .”).

The core combination is straightforward. Saggio discloses a system for simultaneously filling multiple self-sealing water balloons, disclosing the claimed invention except for the elastic fasteners. Appx2829-2830; Appx5524 at 116:7-10; Appx2883 at Figs. 6-7, Appx2884 ¶¶ 6-7. Saggio does not, however, disclose how those balloons are held on the tubes. Donaldson teaches that elastic fasteners (O-rings) can be used to hold the balloons on tubes, and that those O-rings can be used to automatically seal the balloons upon detachment. Appx2830; Appx5524; Appx2888 at Abstract; Appx2889 at Fig. 1; Appx2891 at Fig. 5; Appx2894 at 1:64-68 and 2:39-41; Appx2895-2896 at 4:65-5:10. One of ordinary skill in the art

would have been motivated to substitute O-rings to clamp and seal the balloons instead of Saggio's self-sealing mechanism (an internal elastic membrane) because, *inter alia*: (1) the O-rings are simpler and cheaper mechanisms than Saggio's more complicated internal elastic membrane; and (2) O-rings also permit one to hold balloons on a large number of tubes without having to use several sets of hands. Appx2833.

This is one of the combinations on which the PTAB relied to institute the '749 patent PGR proceedings. Appx2502-2503. The other combination involved Cooper. Appx2872. It would have been obvious to have used other housings with hose attachments—such as Cooper—to deliver water to multiple balloons.<sup>10</sup> Appx2832 ¶83. Defendants explained how this combination of Saggio, Cooper, and Donaldson suggested the claimed combinations of the '749 and '282 patents. Appx2832-2836; Appx2845-2849. Defendants also pointed out that the PTAB instituted PGRs for both the '749 and '282 patents based upon this combination. Appx2421-2422.

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<sup>10</sup> Cooper teaches a flat-faced housing that can be attached to a garden hose and has several tubes for delivering fluid disposed closely together. Appx2876 at 2:20-26, Appx2873 at Fig. 1. There has been no argument that the shape of the housing used in the patents-in-suit is in any way inventive. Indeed, the patents suggest that the shape of the housing is unimportant to the functionality of the invention. Appx74 at 6:17-24; Appx86 at 6:17-24.



**1. Zuru Persuaded the District Court to Ignore Key Evidence**

Throughout the preliminary injunction briefing, Zuru repeatedly urged the district court to ignore Defendants’ arguments and simply incorporate the district court’s prior preliminary injunction opinion from *Tinnus II* (Case 6:16-cv-33-RWS-JDL), stating:

- Because the “Court previously ruled that Telebrands had failed to raise a substantial question concerning the validity of the ’282 and ’749 patents[,] . . . the Court here need only address the limited issue” of infringement. Appx1852.
- “I understand why Telebrands presented that, but this court has been there. We’ve gone through those references. The court has reached conclusions on that, and so I’m going to let that stand kind of what we’ve been through because nothing has really changed with that.” Appx5574.

But prior preliminary injunction decisions are not binding because they “are just that—preliminary—and must often be made hastily and on less than a full record.” *Southern Oregon Barter Fair v. Jackson County*, 372 F.3d 1128, 1136 (9th Cir. 2004); *see also Outside the Box Innovations, LLC v. Travel Caddy, Inc.*, 695 F.3d 1285, 1302 (Fed. Cir. 2012) (claims constructions during preliminary injunction are “tentative” and can be revisited). Moreover, respectfully, the district

court's discussion and conclusions in *Zuru II* regarding the prior art and invalidity issues are demonstrably wrong. *See* Defendants' May 19, 2017 Opening Brief at 24-40, in *Tinnus Enters., LLC v. Telebrands Corp.*, Nos. 17-1175, -1760, -1811 (Fed. Cir.). In addition, since the district court's September 29, 2016 preliminary injunction Order in *Zuru II* (Case 6:16-cv-33-RWS-JDL, Dkt. 142), three very important events occurred: (1) Defendants' expert provide more detailed testimony about the inherent features of the Donaldson elastic fastener; (2) Defendants deposed Zuru's validity expert; and (3) perhaps most significantly, the PTAB instituted PGRs for the '749 and '282 patents.

Defendants brought these developments to the district court's attention. Their expert, Dr. Kamrin, submitted a new declaration describing in great detail the key Donaldson prior art reference, as well as other references. Appx2813. That declaration provided additional explanations and evidence, including mathematical equations and force diagrams, as to why Donaldson's O-ring was inherently capable of permitting a balloon to detach when shaken. Appx2834-2835 at ¶¶96-97; Appx2837-2839 at ¶¶110-117. He also explained that the O-ring used in the obvious combination undoubtedly would have been capable of detaching upon filling and/or shaking because "[i]t would not have even occurred to one of ordinary skill in the art to have used an O-ring that clamped the balloon so tightly that it was difficult to detach, especially since Donaldson teaches that inflating

balloons should be easy for children.” Appx2840 ¶117. *Significantly, Zuru did not even attempt to rebut this testimony.*

That is because this testimony is not rebuttable. Zuru’s expert, Dr. Kudrowitz, conceded in his deposition—and thereby agreed with Defendants’ expert—that Donaldson teaches an O-ring that clamps, automatically detaches after a balloon is filled with a fluid and the surface on which the O-ring sits accelerates away, and automatically seals the balloon. Appx5583-5584 (citing Appx3778 at 295:6-25; Appx3779 at 300:18-21, 301:1-4, and 301:20-302:7; Appx3786 at 329:5-10). He also admitted that Donaldson’s O-ring is *structurally the same as* the O-ring in the patents, which claim only *apparatuses*. Appx5584-5585 (citing Appx3778 at 295:6-8, Appx3786 at 329:5-10). Dr. Kudrowitz additionally provided key deposition testimony establishing that Defendants’ obviousness argument is a simple combination of familiar elements that yield a predictable result. *See KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 416 (2007). For example, he admitted that one of ordinary skill in the art would have understood how to implement an O-ring to perform the claimed functions, and would have known that when an O-ring is used to clamp a balloon on a tube, it can potentially fall off after filling the balloon or when shaken. Appx5585-5586 (citing Appx3777 at 292:7-13, 292:20-293:22, 293:23-294:2, and 294:10-25).

Defendants repeatedly argued that the PTAB’s institution decisions and

rationale confirmed the correctness of Defendants' obviousness defense to the preliminary injunction motion. Appx2421-2422; Appx2494-2500; Appx2502-2506; Appx2533-2541; Appx2506, Appx2546-2547; Appx5429-5430; Appx5583. Nevertheless, the district court apparently accepted Zuru's invitation to ignore this evidence. Its opinion does not even *mention* a single rationale of the PTAB that it disagrees with or believes is deficient, let alone address Dr. Kamrin's inherency testimony or Dr. Kudrowitz's admissions. These omissions are, by themselves, reversible error. *See Procter & Gamble Co. v. Kraft Foods Glob., Inc.*, 549 F.3d 842, 847 (Fed. Cir. 2008) ("[T]he district court should consider the current posture of the . . . proceedings at the PTO when evaluating [plaintiffs'] likelihood of success on the merits."); *see also E.I. DuPont de Nemours & Co. v. Phillips Petroleum*, 835 F.2d 277, 278 (Fed. Cir. 1987) ("The very existence of the conflict [between the PTO and the district court regarding validity] supports Phillips' argument that substantial legal questions concerning claim interpretation exist.").

## **2. The District Court Misunderstood the Prior Art and Defendants' Obviousness Arguments.**

In addition to ignoring critical evidence, the district court clearly misunderstood the obviousness combination urged by Defendants, as evidenced by its rejecting phantom arguments never made by Defendants or the PTAB, while entirely failing to mention those that were actually made. This is not the first time

that the district court has done this. Specifically, in preliminarily enjoining Telebrands' Battle Balloons product in the *Zuru II*, the district court made the same three errors that we discuss below in this Section III.A.2.<sup>11</sup>

First, the district court below sought to distinguish Donaldson because it was “unclear” how one could use Donaldson’s release “mechanism to release a plurality of containers” in the obvious combination. Appx21. But Defendants could not have been clearer that Donaldson’s release mechanism was not part of any proposed combination. Rather, the combination offered by Defendants and relied on by the PTAB uses the *O-rings* of Donaldson, not its mechanical release mechanism:

- Defendants’ preliminary injunction opposition stated that “a POSA would use an O-ring like that taught in Donaldson to replace Saggio’s self-sealing internal membrane . . .” Appx2422.
- Defendants’ expert testified that the combination involves “the addition of an O-ring, such as the one taught in Donaldson,” Appx2833 ¶88.
- The PTAB stated that the combination involved modifying the prior art “to include an O-ring, such as the O-ring taught in Donaldson . . .

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<sup>11</sup> See Telebrands’ May 19, 2017 Opening Brief and appendix citations at 26-28, 34-36, in *Tinnus Enters., LLC v. Telebrands Corp.*, Nos. 17-1175, -1760, -1811 (Fed. Cir.).

.” Appx2502; *see also* Appx2499-2500.

The district court entirely ignored these inexorable facts. It never even responded to the *unrefuted* evidence that Donaldson’s O-rings are capable of performing the same functions as the patents-in-suit—clamping balloons to a tube and automatically sealing them upon detachment upon either filling or shaking. Appx2830 ¶72; Appx2833-2835 at ¶¶86, 95-97; Appx2837-2839 at ¶¶110-117; Appx5524-5526 . Indeed, Zuru’s expert admitted that Donaldson’s elastic fasteners are *structurally identical* to those in the patents-in-suit, Appx2729 at 329:5-10. *There was no contrary evidence.*

The district court also sought to distinguish the combination because “it is not clear how the inner membrane of Saggio would indeed work to clamp the balloons to the tubes of Cooper . . . .” Appx22-23.<sup>12</sup> But again, the court misunderstands the proposed combination. As clearly stated by Defendants, in the proposed obviousness combination, the simpler O-rings of Donaldson are *substituted* for the complex (and more expensive) membrane of Saggio:

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<sup>12</sup> This statement is particularly puzzling because, immediately before, the district court correctly state that “Defendants’ argue that . . . replacing Saggio’s self-sealing membrane with Donaldson’s O-ring are simple substitutions with expected results.” Appx22. The court then incorrectly states that “Defendants offer little more than this conclusion. But in fact, Defendants offered its un rebutted expert testimony, the PTAB opinions, and Zuru’s own expert admissions on the subject. As described above, Zuru’s expert *admitted* that one of ordinary skill in the art would have been able to implement an O-ring to clamp and self-seal a balloon. Appx3777; Appx5585-5586. Zuru offered no rebuttal evidence on this point.

- Defendants’ preliminary injunction opposition stated that “Donaldson discloses an O-ring that can be used as an alternative to Saggio’s one-way valve.” Appx2421.
- Defendants’ expert testified that the combination involves “substituting O-rings for the elastic membrane used in Saggio . . . .” Appx2833 ¶89.
- The PTAB stated that the combination involved substituting an O-ring “in place of Saggio’s self-sealing internal elastic membrane.” Appx2502.
- The PTAB explained that the Patent Owner—like the district court below—misconstrued the obviousness combination, which does not involve using both the internal elastic membrane and an O-ring, but instead relates to the “*substitution* of one sealing means—Saggio’s internal membrane—with another cheaper sealing means.” Appx2499-2500 (emphasis in original).

The district court’s misunderstanding of Saggio’s role in the obviousness combination undermines its conclusion that Defendants did not raise a substantial question regarding validity. Among other things, the clear advantages of the O-ring design over the more complicated Saggio design provided strong motivations to combine. Appx2833 ¶¶ 88-90.

Third, the district court criticized Defendants for “fail[ing] to explain . . . how Donaldson’s teachings would be understood and applied to containers filled with fluid.” Appx22-23. But no party has *ever* made this argument, nor could they. Donaldson’s O-ring is used with gas-filled balloons. Appx2888. Because the patents-in-suit define fluid to include gases, Appx84 at 1:28-29, *id.* at 2:46-47, Appx85 at 3:22-24, *all of Donaldson’s teachings are with respect to containers filled with “fluid.”* Indeed, Donaldson even expressly states that its containers hold “fluid.” Appx2895 at 3:17. And even assuming for the sake of argument that the patents were limited to water rather than fluid (and they are not), this distinction would be irrelevant. Because Donaldson’s elastic fasteners are structurally identical to those in the patents-in-suit, Appx2729 at 329:5-10, they are necessarily capable of sealing containers with water. That is all that is required.

### **3. The District Court Incorrectly Treated the Apparatus Claims as Method Claims**

The district court repeated yet another error it made in *Zuru II*, requiring that Donaldson “teach removing the container by partially filling or shaking.”<sup>13</sup> Appx21. This finding was an abuse of discretion for multiple reasons.

*First*, putting aside for the moment the issue of whether Donaldson does in fact “teach” this operation (and it does), the claims merely require that the elastic

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<sup>13</sup> See Telebrands’ May 19, 2017 Opening Brief and appendix citations at 34-39, in *Tinnus Enters., LLC v. Telebrands Corp.*, Nos. 17-1175, -1760, -1811 (Fed. Cir.).



fastener “permit” (allow) detachment by partially filling and/or shaking at a certain moment in time—“upon detachment.” Appx74 at 6:50-54. They do not require the filling or shaking to be the sole *cause* of detachment.<sup>14</sup>

*Second*, the court’s finding erroneously imports use limitations into the patents’ apparatus claims—apparatus claims recite a structure, not a use. *See In re Schreiber*, 128 F.3d 1473, 1477-78 (Fed. Cir. 1997). Although functional language can be used to define the structure—identifying “what it does rather than by what it is,” *In re Swinehart*, 439 F.2d 210, 212 (CCPA 1971)—any prior art that meets the structural limitations of the claim and *is capable* of performing the recited function covers that apparatus claim. *Id.* at 213 (“By its own literal terms a claim employing such [functional] language covers any and all embodiments which perform the recited function.”); *see also Schreiber*, 128 F.3d at 1477 (“It is well settled that the recitation of a new intended use for an old product does not make a claim to that old product patentable.”) (citations omitted); *Hewlett-Packard Co. v. Bausch & Lomb, Inc.*, 909 F.2d 1464, 1468 & n.2 (Fed. Cir. 1990) (relevant inquiry is whether the claims are “unobviously different” from the prior art, not whether they “*operate* differently) (emphasis in original).

It was on this basis that the PTAB correctly rejected the Patent Owner’s

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<sup>14</sup> The related ’066 patent shows that Zuru well understood the difference between *permitting* detachment and *causing* detachment. Specifically, the ’066 patent claims recite that shaking a container substantially filled with water “causes” the containers to detach. Appx2209 at 6:41-51.

identical arguments in the PGR institution decisions. Appx2496-2497, Appx2536. And Defendants submitted this and a wealth of other *unrebutted* evidence to the district court establishing (1) that Donaldson’s O-rings are necessarily capable of restricting the balloon so that it detaches when shaken;<sup>15</sup> and (2) that the O-rings used in the prior art obviousness combination permit the user to detach the balloon from the tube without too much difficulty and without tearing the balloon, which necessarily would result in O-rings of a strength that permit detachment upon shaking.<sup>16</sup>

Third, even if an explicit disclosure of the claimed “sufficiently limited to permit” detachment “upon . . . at least partially filling” and/or “shaking” was required (and it is not), Appx74 at 6:50-54, the district court erred in ignoring the unrebutted testimony that Donaldson discloses these alternative features.

Defendants’ expert testified without contradiction that the Donaldson’s O-ring and balloon “pop[] off” when the balloon “gets full enough”—*i.e.*, the balloon is “permitted” to detach “upon . . . at least partially filling.” Appx5524 at 116:21-25; *see also* Appx2830 ¶72; Appx2833-2834 ¶¶ 86, 95-96. And both experts agree that Donaldson discloses an O-ring that releases after the tube upon which it seats

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<sup>15</sup> *See* Appx1412-1414 ¶¶10-11, 19-20; Appx1456-1457 at ¶¶127-128; Appx1551-1554 at ¶¶93-99; Appx2834-2835 at ¶¶96-97; Appx2837-2839 at ¶¶110-116; Appx5525-5526.

<sup>16</sup> *See* Appx1456-1457 at ¶¶127-128, Appx1554-1555 at ¶100; Appx2835 at ¶97; Appx2839-2840 at ¶117.

accelerates away (the district court has previously construed “shaking” as “applying an acceleration”). Appx2834 ¶96; Appx3779 301:1-4 and 301:20-302:7.

**4. The District Court’s Secondary Considerations Findings Cannot Support a Finding that Defendants’ Obviousness Defense Lacks “Substantial Merit.”**

The district court’s conclusion that Defendants failed to raise a substantial question concerning validity is based on the court’s finding of “relevant secondary considerations *and* the shortcomings in Telebrands’s obviousness combinations . . . .” Appx24 (emphasis added). But as described above, the district court’s analysis of the combination is deeply flawed. Moreover, “a strong *prima facie* obviousness showing may stand even in the face of considerable evidence of secondary considerations.” *Rothman v. Target Corp.*, 556 F.3d 1310, 1322 (Fed. Cir. 2009).<sup>17</sup> And the Donaldson/Saggio/Cooper combination is a very strong showing of obviousness. The district court perfunctory discussion of secondary considerations is insufficient to eliminate the substantial question of validity here, where the district court provides no legally valid, reasoned basis distinguishing the

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<sup>17</sup> See *Graham v. John Deere Co.*, 383 U.S. 1, 35-36 (1966) (long-felt need and “wide commercial success” alleged by patentee does not “tip the scales of patentability” in favor of nonobviousness because the claimed invention rests on “nontechnical mechanical differences in a device”); *Jungersen v. Ostby & Barton Co.*, 335 U.S. 560, 567 (1949) (“considerable commercial success” does not “fill the void”); *Leapfrog Enterprises, Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007) (“[G]iven the strength of the *prima facie* obviousness showing, the evidence on secondary considerations was inadequate to overcome a final conclusion that [the claim] would have been obvious.”); see also *Agrizap, Inc. v. Woodstream Corp.*, 520 F.3d 1337, 1344 (Fed. Cir. 2008) (same).

proposed obviousness combination, and where the PTAB has considered the same evidence and found that the precise patents at issue here are more likely than not invalid.

In any event, the secondary considerations here are not “considerable.” The PTAB considered the same secondary considerations on which the district court relied—copying, praise, and commercial success, Appx22-24<sup>18</sup>—and found them insufficient to prevent the ’282 and ’749 patents from being more likely than not invalid. Appx2504-2505, Appx2540. Significantly, the district court did not explain any disagreement with the PTAB’s analysis of the secondary considerations evidence.

The district court also failed to explain any alleged link between the secondary considerations and non-obviousness. As to copying, “[i]t is simplistic to assert that copying per se should bolster the validity of a patent.” *Cable Elec. Prods., Inc. v. Genmark, Inc.*, 770 F.2d 1015, 1028 (Fed. Cir. 1985), *overruled on other grounds by Midwest Indus., Inc. v. Karavan Trailers, Inc.*, 175 F.3d 1356 (Fed. Cir. 1999) (en banc). Copying can, for example, “occur[] out of a general lack of concern for patent property.” *Id.* That is the case here, where the alleged

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<sup>18</sup> The district court mentioned that Mr. Malone testified that developing his idea took “‘several summers’ and ‘multiple years’,” Appx24. But how long an inventor takes to develop an idea is not a relevant consideration under any Federal Circuit case law. Nor should it be. An inventor should not be able to strengthen his patent through inefficiency or self-serving testimony.

copying—in the first-generation Balloon Bonanza product—occurred in 2014, *well before the issuance of the asserted patents (or their parent patent, or the publication of any of the patent applications)*. Appx64; Appx75; Appx2199; Appx2922;. The accused product in this lawsuit—Easy Einstein—was developed in late 2016, well after the alleged copying. Appx2899-2900. Finally, even where copying evidence is relevant, it is “only equivocal evidence” of non-obviousness, as the district court pointed to no more compelling evidence of secondary considerations. *Ecolochem, Inc. v. S. Cal. Edison Co.*, 227 F.3d 1361, 1380 (Fed. Cir. 2000).

The district court, for example, did not explain why the secondary considerations arose from the claimed invention as opposed to marketing (which obviously plays a large role in toy industry sales) or the features already known in the prior art. *See Amazon.com*, 239 F.3d at 1366 (ignoring commercial success evidence at the preliminary injunction stage where the patentee “did not submit any evidence” that the commercial feature was “related to the alleged patented feature”); *see also Wyers v. Master Lock Co.*, 616 F.3d 1231, 1246 (Fed. Cir. 2010) (“For objective evidence of secondary considerations to be accorded substantial weight, its proponent must establish a nexus between the evidence and the merits of the claimed invention.”); *In re Huai-Hung Kao*, 639 F.3d 1057, 1068 (Fed. Cir. 2011) (same); *The W. Union Co. v. Moneygram Payment Sys., Inc.*, 626 F.3d 1361,

1373 (Fed. Cir. 2010) (discounting commercial success evidence where success arose as a result of the prior art features).

\* \* \* \* \*

In sum, at the preliminary injunction stage, vulnerability is key. *Amazon.com*, 239 F.3d at 1359. The PTAB has concluded that the PGR Petitioner “is more likely than not” to “prevail in showing that the . . . claims” of the ’749 and ’282 patents are unpatentable. Appx2474, Appx2506, Appx2510, Appx2546. Defendants presented *unrebutted* evidence that the O-ring suggested by the prior art was capable of performing the claimed “elastic fastener” functions. And Defendants provided *unrebutted* evidence that the straightforward obviousness combination did “no more than yield predictable results.” *KSR*, 550 U.S. at 416 (2007). Indeed, Zuru’s expert conceded that one of ordinary skill in the art would have understood how to implement Donaldson’s teaching of using an O-ring to clamp and seal a balloon and would have understood that the O-ring could detach when shaken or when the balloon is filled. Appx3777 at 292:7-13, 292:20-294:25. Even if Zuru’s alleged secondary considerations are accepted as true (and they should not be), Defendants have presented more than enough evidence to demonstrate vulnerability. *See Amazon.com*, 239 F.3d at 1366 (finding that, even if the commercial embodiment is covered by an asserted patent claim, the secondary considerations are insufficient to support a grant of a preliminary

injunction “in view of the substantial question of validity raised by the prior art references cited by” the defendant).

The district court’s misunderstanding and misapplication of the obviousness evidence, failure to consider the PTAB decision, and misapplication of the claims each individually amount to an abuse of discretion that would support reversal. *See Cooter*, 496 U.S. at 405 (“A district court would necessarily abuse its discretion if it based its ruling on an erroneous view of the law or on a clearly erroneous assessment of the evidence.”).

**B. The District Court Erred In Finding that Zuru Was Likely To Show That Easy Einstein Infringed the ’749 and ’282 Patents.**

The claimed “elastic fastener” must both “clamp[]” a container to a “tube” and “*automatically* seal its respective container *upon detachment*. . . .” Appx74 at 6:44-51; Appx86 at 6:41-51. The district court erroneously found that the Easy Einstein’s PVC cap—and the cap alone—performs these two functions. Appx15-18. The district court’s conclusion is contrary to the undisputed evidence that:

- without the PVC cap, the Easy Einstein Balloons remain attached to the inner plugs which, in turn, remain attached to the tubes;
- without the PVC cap, the internal valve in the Easy Einstein Balloons seals “upon detachment,” thus preventing water from leaking; and
- in contrast, without the internal plug, Easy Einstein cannot function—

it will not clamp, fill with water, or seal. Appx5522 at 114:7-9.

**Easy Einstein's PVC Cap**



Even though the internal valve closes upon detachment, the district court ignored the valve and internal plug, at Zuru's urging:

[W]e don't care about what the inner plug is doing. All we care about is does the outer elastic fastener perform the claimed functions of the claimed elastic fastener.

Appx5568 at 160:14-18; *see also* Appx1989-1990. The reason Zuru sought to divert attention away from the inner plug is because its expert conceded that the plug is a “non-trivial change,” Appx1989 ¶ 24, and because the patents expressly distinguish the claimed “elastic fasteners” from the unclaimed “plugs.”

Specifically, the patents disclose “internal or external plugs affixed to the necks of containers,” Appx85 at 3:1, identify such plugs as a subset of elastic valves, but then proceed to claim only elastic fasteners, a different subset of elastic valves.

*See* Appx84-85 at 2:54-3:21, Appx86 at 6:41-47.

The district court's infringement conclusion that the PVC cap performs the



claimed functions is based on a legally erroneous application of the claims to the Easy Einstein Balloons product.

**1. The accused PVC cap is not “configured . . . to automatically seal” Easy Einstein Balloons “*upon detachment.*”**

As Zuru’s expert admits, the fact that a component of a balloon-filling assembly (such as the bottom of the balloon) helps “keep[] the fluid from leaking out” and “helps prevent leakage” does *not* mean that the component “seals *upon detachment.*” Appx5446 at 38:15-23; Appx5448 at 40:11-24. The district court erred in failing to recognize this distinction, effectively reading “upon detachment” out of the claim. It focused on whether the Easy Einstein’s PVC cap—like other components, including the balloon itself<sup>19</sup>—helps prevent leakage *during and after water is placed in the balloon.* Appx16.

But that is not what the claims require. The claims require that the claimed “elastic fastener” be configured to take a *particular action* (“automatically seal”) at a *particular time* (“upon detachment” of the container). Appx74 at 6:48-49; Appx86 at 6:45-46. This requirement is consistent with the patent specifications, which disclose that the sealing function occurs at the same time that the containers

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<sup>19</sup> For example, both experts conducted experiments in which pinhole leaks in the bottom of the balloon caused the balloons to rapidly deflate. Appx2820-2821; Appx5439-5440. These experiments show that the quality of the balloon material affects leakage, not that the balloon material seals *upon detachment.*

detach: “a plurality of elastic fasteners, each elastic fastener clamping each container to a corresponding hollow tube, such that *when the containers are filled with fluid and detached* from the corresponding hollow tubes, *each elastic fastener seals each container with the fluid inside.*” See Appx84 at 2:15-19 (emphasis added). Upon detachment (but not before), the patents’ elastic fasteners (*e.g.*, O-rings) shrink in diameter, thereby cinching the neck of the balloon together. Appx5523 at 115:2-11. The disclosed O-ring does not seal the balloon before the tube is detached, but does—by reducing its diameter— seal the balloon after it detaches from the tube.<sup>20</sup>

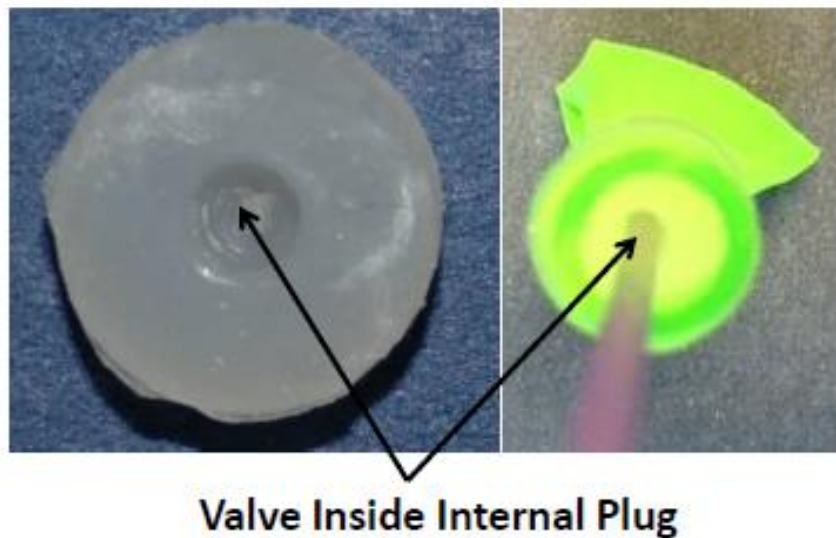
The district court’s failure to give meaning to this claim limitation is an abuse of discretion justifying reversal. See *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006) (“claims are interpreted with an eye toward giving effect to all terms in the claim”); *Chamberlain Grp., Inc. v. Lear Corp.*, 516 F.3d 1331, 1339 (Fed. Cir. 2008) (“Where a district court relies on an erroneous claim construction in granting injunctive relief, this legal error may well constitute an abuse of discretion requiring this court to vacate the injunction.”); see also *SRAM Corp. v. AD-II Eng’g, Inc.*, 465 F.3d 1351, 1352-53 (Fed. Cir. 2006) (“Because the

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<sup>20</sup> In contrast, the PVC cap remains in the exact same position—and performs the exact same function—both before and after detachment: it holds the plug in position relative to the neck of the balloon. Upon detachment, the valve inside the canal of the plug closes and seals. At all times, the PVC cap just keeps doing what it always does.

district court erred in construing claim 16, we vacate the district court’s . . . grant of an injunction . . . and remand for further proceedings consistent with this opinion.”); *Cooter*, 496 U.S. at 405 (“A district court would necessarily abuse its discretion if it based its ruling on an erroneous view of the law or on a clearly erroneous assessment of the evidence.”).

The actual mechanism on the Easy Einstein that seals “upon detachment” is not in dispute—it is the valve inside of the canal of the inner plug.



The valve “grips onto the tube, providing a resistive force” that holds the weight of the plug and balloon. Appx5506 at 98:3-9; *see also* Appx2817-2818, Appx5535-5536. When the internal plug slips off of the tube (taking the balloon with it), the valve closes shut so that water does not escape. Appx2818, Appx5506, Appx5515. The valve performs precisely the same function even if the PVC cap is removed. Appx2823 ¶¶43-45; Appx5515 at 107:1-6; Appx5533-5534

at 125:22-126:10; *see also* Appx2818-2820 ¶¶27, 30-31. Defendants’ expert, Dr. Kamrin, performed experiments showing this. Appx7144-7150 (videos).

To be sure, the PVC cap—like the balloon itself—helps maintain the overall integrity of the system. Namely, it helps maintain the position of the plug inside, and perpendicular to, the neck of the balloon. Appx2818 ¶ 26.

### Easy Einstein’s PVC Cap



If, for example, the cap is removed by hand and the plug shifts relative to the balloon, water can leak or the balloon could fall off. Appx5509. Indeed, Zuru’s expert noticed that in some instances the balloons without the PVC cap leaked water “up out around the neck of the balloon outside of that internal” plug, Appx5436 at 28:22-24, and the district court cited to evidence of “at least one uncapped balloon . . . falling off its plug” in several tests, Appx16. But even if this finding were relevant (and it is not), the court’s reliance on an outlier (nearly all other balloons tested *remained* attached) to prove likelihood of infringement is an abuse of discretion.

Even more important, this evidence is irrelevant to the claim limitation. If Telebrands hypothetically needed to glue the internal plug into the inside of the balloon to maintain the position of the plugs and prevent water from leaking out, no reasonable argument could be made that the glue “*automatically seals*” the balloon “*upon detachment.*” The glue in that hypothetical would be a *necessary* component to help prevent water from escaping, both before and after detachment. But that does not mean that it performs the function of sealing the balloon “upon detachment,” even though it would indeed prevent the balloon from failing by “falling off its plug,” as found by the district court with respect to the PVC cap, Appx16.<sup>21</sup> Stated another way, the fact that a component—such as a PVC cap—may in some instances help hold other components of the system together does not mean that it performs the act of “automatically sealing” the balloon “upon detachment.”

The district court’s failure to distinguish between components that help prevent water from leaking (both during and after filling) and components that seal the balloon at the moment of detachment directly resulted in its erroneous finding that there is a likelihood of infringement.

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<sup>21</sup> Although disputed by Defendants’ expert, the district court also found that the “uncapped balloons frequently leak out water at a *faster rate* than the balloons with caps.” Appx16 (emphasis added). But as discussed above, both the capped and uncapped products leak (indeed, all water balloons eventually leak). Appx5507-5508 at 99:24-100:7. The court’s finding does not answer the question of whether the PVC cap “automatically seals” the balloon “upon detachment.”

## 2. The District Court Read the “Clamping” Limitation Out of the Claims.

The elastic fastener must also “clamp[] a . . . container[] to a . . . tube.”

Appx74 at 6:44-54. Easy Einstein’s PVC cap does not do this. First, the cap does not clamp a balloon to a tube because the balloons are attached to the internal plug, not the tube. Appx2817 ¶21; Appx2823-2824 ¶46. Indeed, the district court itself acknowledged that the PVC cap allegedly “secures the balloon to the *inner silicon piece*” (*i.e.*, the plug), not to the tube. Appx17 (emphasis added).

Second, the district court erred when it found that the clamping limitation is met if the PVC cap “exerts a clamping force onto the tube through the inner silicon piece.” Appx17. As an initial matter, the evidence on this point is disputed and does not come close to establishing the clear showing required for preliminary injunctive relief. But more fundamentally, the “elastic fastener” must do more than simply *assist* adherence of the balloon to the tube—it must actually “*clamp[] a . . . container[] to a . . . tube.*” Appx74 at 6:44-54.<sup>22</sup> The PVC cap does not do this. Appx5543-5544 at 135:24-136:13. Instead, the valve in the plug “grips onto the tube, providing a resistive force” that holds the weight of the plug and balloon. Appx5506 at 98:3-9; *see also* Appx2817-2818, Appx5535-5536. And the balloon and plug are sized so that the balloon “holds itself in place through its own

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<sup>22</sup> The claims require an “elastic fastener” that both clamps and has a restrictive force that permits detachment upon at least partially filling or shaking. Appx74 at 6:44-54.

constrictive forces . . . .” Appx2817 ¶21; Appx7143 (video at 00:00-00:30); Appx7144 (video at 00:10-01:40). Defendants respectfully suggest that the Court inspect the Easy Einstein Balloons submitted with these papers, including removing the PVC caps off of some of the balloons to observe this first hand. Appx3769.

Indeed, Zuru and its expert do not dispute that, irrespective of whether the PVC cap is present or not, the balloons of the Easy Einstein products remain “clamped” in place. Specifically, Zuru’s expert’s experiments established that *all* of the tested Easy Einstein balloons without PVC caps remained “clamped” in place after he removed the PVC caps. Appx1995 ¶30. Indeed, in the Zuru’s expert’s second experiment, all the balloons remained clamped until he repeatedly shook them off—and even then he had to remove one of the plugs (that did not have a PVC cap) by hand. Appx2215 (video). Stills from the parties’ experts illustrate this point:



**Zuru's Expert Video**  
Appx2215 (video at 00:17)<sup>23</sup>



**Defendants' Expert Video**  
Appx7144 (video at 01:07)

Finally, if Zuru's "force-gauge test" on which the district court relied so heavily is correct—and the Easy Einstein balloons with the PVC cap really did require an average of 20 percent more force to remove them, Appx2976—that fact conclusively shows that the balloons clamped even without the PVC cap.

Specifically, stated in reverse, according to Zuru's expert, the balloons without the cap exerted a force that was 83.33% as much as the balloons with the cap. Zuru offered no evidence that the additional force allegedly provided by the PVC cap is either necessary or sufficient to clamp the balloons on the plug (or the plug on the tube).

In short, not all restrictive forces are sufficient to *clamp* two or more items together. Zuru has not submitted a scintilla of evidence that the PVC caps perform

<sup>23</sup> The photo on the left illustrates an experiment with 25 balloons: 12 with PVC caps, and 13 without. Appx1992 ; ¶27; Appx1995. The photo on the right has 25 balloons: 18 with PVC caps, and 7 without. Appx2819-2820 ¶30.



this function.

### **CONCLUSION**

The district court lacked authority to enter this injunction because venue was improper. The district court also provided no valid basis for finding that the proposed obviousness combination did not create a substantial question of invalidity, despite the PTAB's finding that the same combination rendered the same patents more likely than not invalid. Finally, the district court erroneously read out of the patent claim language requiring that the elastic fastener seal "upon detachment" and wrongly found that the PVC cap in the Easy Einstein Balloons "clamps" a balloon to a tube. The preliminary injunction should be reversed.

Respectfully submitted,

Dated: July 6, 2017

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# **ADDENDUM (NON-CONFIDENTIAL)**

**Addendum Contents**

<b>Date Entered</b>	<b>Docket No.</b>	<b>Description</b>	<b>Appx Pages</b>
5/19/2017	89	Sealed Memorandum Opinion and Order re Preliminary Injunction	Appx1-30
6/16/2017	122	Order issuing Injunction	Appx31-41
		U.S. Pat. No. 9,242,749	Appx64-74
		U.S. Pat. No. 9,315,282	Appx75-86

**CONFIDENTIAL MATERIAL OMITTED:**

Confidential material has been deleted from the Addendum. *See* Appx23, Appx26-28, Appx35-39. The deleted confidential material comprises: confidential sales, pricing, profits, and other financial information; confidential sales and profit projections; and internal email regarding product design. The materials in the Addendum will be included in the Joint Appendix. Pursuant to Federal Circuit Rule 30(h), Defendants will confer with Plaintiffs regarding whether protected portions need to be protected prior to submission of the Joint Appendix.



continuations of the '066 Patent and are all entitled "System and Method for Filling Containers with Fluids." '066 Patent; '749 Patent; '282 Patent; '612 Patent; '779 Patent. At issue in this action are the '749, '282, '612 and '779 Patents (collectively "the patents-in-suit"). Docket No. 1.

***B. Tinnus and ZURU***

Tinnus is a company based in Plano, Texas, that was founded and is solely owned by the inventor of the patents-in-suit, Josh Malone. Docket No. 1 at ¶ 20. The patents-in-suit are based on the invention of a toy product now known as "Bunch O Balloons." *Id.* at ¶ 21. The Bunch O Balloons device is a hose attachment that is fitted with either 35 or 37 balloons. *Id.* at ¶ 22. When the device is attached to a hose and the water is turned on, the balloons will fill and seal themselves upon release, allowing someone to fill up to 100 water balloons in 60 seconds. *Id.* at ¶¶ 21–22. A photo of the Bunch O Balloons product is set forth below:



(Bunch O Balloons)

Tinnus filed for a patent application on February 7, 2014, which eventually issued as the '066 Patent on June 9, 2015, and led to the patents-in-suit as continuations. *Id.* at ¶¶ 12–18, 21; '749 Patent; '282 Patent; '612 Patent; '779 Patent.

Mr. Malone began taking steps to manufacture his Bunch O Balloons product in March 2014, and the first batch of product was manufactured in June 2014. *Id.* at ¶ 23. To raise funds to continue the manufacture of his product, Mr. Malone launched a Kickstarter campaign on July 22, 2014. *Id.* at ¶ 24. The project reached its funding goal within 12 hours and has raised nearly \$1 million to date, with the Kickstarter video obtaining over 2.9 million views. *Id.* at ¶¶ 26, 27. On the very first day the Kickstarter campaign launched, Tinnus received a total of 598 public orders for the product, selling out of initial production batch. *Id.* at ¶¶ 34, 35. Also on that same day, Mr. Malone's Bunch O Balloons invention was featured on *Sports Illustrated's* online magazine. *Id.* at ¶ 28. Both *Time* magazine and *People* magazine covered the Bunch O Balloons product on their respective websites, and Mr. Malone appeared on nationally-televised broadcasts of *Good Morning America* and the *Today Show*. *Id.* at ¶¶ 29–32. The Bunch O Balloons product also went viral on YouTube, with approximately 24 million views of its promotional video. *Id.* at ¶ 33.

Tinnus shipped the first batch of Bunch O Balloons product on August 29, 2014. *Id.* at ¶ 39. Tinnus had also begun negotiating to partner with ZURU to manufacture, market, and sell Bunch O Balloons. *Id.* at ¶ 40. On August 19, 2014, Tinnus and ZURU entered into an exclusive-license agreement where Tinnus agreed to license ZURU any present or future patent rights owned by Tinnus related to the Bunch O Balloons product. *Id.* at ¶ 41. ZURU is a family-owned toy company founded in New Zealand, organized in Hong Kong, with a principal place of business in China. *Id.* at ¶ 3. ZURU is currently involved in the development, production, and marketing of the Bunch O Balloons product. *Id.* at ¶ 42.

### ***C. Telebrands***

Telebrands is a large developer and marketer of consumer products, including children's toys. Docket No. 22-1, Declaration of Bala Iyer ("Iyer Decl.") at ¶ 4. Telebrands is well-known

in the retail industry for their nationwide advertising programs known by the mark of “As Seen on TV.” *Id.* As of early 2015, Telebrands was advertising and offering for sale a product called “Balloon Bonanza,” which appeared to be an exact replica of Mr. Malone’s invention. Docket No. 1 at ¶ 52. In 2015 and 2016, Telebrands marketed and sold products for filling multiple water balloons at one time—Balloon Bonanza and Battle Balloons.<sup>1</sup> Iyer Decl. at ¶ 8. As of late 2016, Telebrands has launched a new water balloon product, “Easy Einstein Balloons.” *Id.* at ¶ 9. Photos of Telebrands’s products are set forth below:



(Balloon Bonanza)



(Battle Balloons)

<sup>1</sup> As discussed in further detail below, the Court has enjoined the sale of both of these products. Case No. 6:15-cv-551, Docket No. 91; Case No. 6:16-cv-33, Docket No. 159.



(Easy Einstein Balloons)

***D. Bulbhead and Bed Bath***

Bulbhead operates the website [www.bulbhead.com](http://www.bulbhead.com), which sells consumer products on behalf of Telebrands, including Easy Einstein Balloons. Docket No. 1 at ¶ 57. Bed Bath is a large retailer that sells Telebrands's products, including Easy Einstein Balloons. *Id.* at ¶ 58.

**II. Procedural Background**

Plaintiffs filed their first suit in this Court on June 9, 2015, alleging that Telebrands's Balloon Bonanza product infringes the '066 Patent. Case No. 6:15-cv-551, Docket No. 1. Plaintiffs filed a motion for a preliminary injunction in that action against Telebrands's Balloon Bonanza products. Case No. 6:15-cv-551, Docket No. 9. This Court held a hearing on the motion and ultimately issued a preliminary injunction, enjoining the sale of Telebrands's Balloon Bonanza products. Case No. 6:15-cv-551, Docket Nos. 66, 84, 91. On January 24, 2017, the Federal Circuit affirmed the Court's injunction. *See Tinnus Enterprises, LLC v. Telebrands Corp.*, 846 F.3d 1190, 1202 (Fed. Cir. 2017). That case has since been stayed pending a subsequent appeal of the Patent Trial and Appeal Board's ("PTAB") final written decision to the Federal Circuit. Case No. 6:15-cv-551, Docket No. 308.



At some point during the pendency and decision on the preliminary injunction as to the Balloon Bonanza products, Telebrands developed its similar “Battle Balloons” product. Plaintiffs filed an emergency motion for contempt of court against Telebrands to enjoin the sale of the Battle Balloons products and for monetary sanctions as to the ’066 Patent. Case No. 6:15-cv-551, Docket No. 113. On February 19, 2016, the Court held a hearing on contempt, soliciting testimony from both side’s experts regarding the technical aspects of the product. Case No. 6:15-cv-551, Docket No. 144. The Court ultimately denied contempt. Case No. 6:15-cv-551, Docket No. 166.

On January 26, 2016, Plaintiffs filed a related action against Telebrands, alleging Telebrands Battle Balloons infringe the ’749 and ’282 Patents. Case No. 6:16-cv-33, Docket Nos. 1, 3. On that same day, Plaintiffs also filed a related suit against several retailers<sup>2</sup> (“Retailer Defendants”) for infringement of the ’066, ’282, and ’749 Patents.<sup>3</sup> Case No. 6:16-cv-34. Plaintiffs then filed an emergency motion for a preliminary injunction in both cases as to the Battle Balloons products for alleged infringement of the ’749 and ’282 Patents. Case No. 6:16-cv-33, Docket No. 19; Case No. 6:16-cv-34, Docket No. 26. The Court consolidated both actions, and on October 31, 2016, an injunction issued against Defendant Telebrands in the lead action. Case No. 6:16-cv-33, Docket No. 159. The Retailer Defendants did not agree to be bound by the injunction against Telebrands and the Court therefore separately considered whether an injunction should issue against the Retailer Defendants. The Court held a hearing on November 21, 2016 and ultimately granted an injunction against the Retailer Defendants. Case No. 6:16-cv-33, Docket Nos. 182, 211, 224. Appeals of these injunctions are currently pending at the Federal Circuit.

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<sup>2</sup> Retailer Defendants are: Bed Bath & Beyond Inc, Fry’s Electronics, Kohl’s Department Stores Inc, Sears Holding Corporation, The Kroger Company, Toys “R” Us-Delaware, Inc., Wal-Mart Stores Inc., and Walgreens Boots Alliance, Inc.

<sup>3</sup> The claims regarding the ’066 Patent as to the Retailer Defendants have since been severed and stayed at the request of the parties pending the appeal of the PTAB’s final written decision. Case No. 6:16-cv-33, Docket No. 256.

Plaintiffs then learned of Telebrands's development of their newest water balloon product, Easy Einstein Balloons. On January 23, 2017, Plaintiffs filed a motion to compel samples, documents, and information related to the Easy Einstein Balloons. Case No. 6:16-cv-33, Docket No. 219. Telebrands opposed this motion, contending that the products were not relevant because they were not accused of infringement and not yet publicly available. Case No. 6:16-cv-33, Docket No. 221. The Court found that these products were relevant to the Court's injunctions and ordered the requested information to be produced subject to the Court's Protective Order. Case No. 6:16-cv-33, Docket No. 223. Thereafter, on March 20, 2017, Plaintiffs filed the instant action alleging that Telebrands's Easy Einstein Balloons infringe the patents-in-suit. Docket No. 1. At that time, Telebrands's Easy Einstein Balloons were already on the market and Plaintiffs moved for an *ex parte* temporary restraining order ("TRO") and preliminary injunction. Docket No. 5.

On March 28, 2017, the Court held a contested evidentiary hearing on the TRO and preliminary injunction. The Court denied Plaintiffs' application for a TRO, but set the preliminary injunction on an expedited briefing schedule and set an additional evidentiary hearing. Docket No. 28. Plaintiffs filed a motion for preliminary injunction on April 3, 2017 (Docket No. 41), and Defendants filed a response on April 7, 2017 (Docket No. 49). The Court held a hearing on April 12, 2017.

### LEGAL STANDARD

"[B]efore the issues of fact and law have been fully explored and finally resolved, the purpose of a preliminary injunction is merely to preserve the relative positions of the parties until a trial on the merits can be held." *Abbott Labs v. Sandoz, Inc.*, 544 F.3d 1341, 1344–45 (Fed. Cir. 2008) (internal quotations omitted); *see Techradium, Inc. v. Blackboard Connect Inc.*, No. 2:08-cv-214, 2009 WL 1152985, at \*2 (E.D. Tex. Apr. 29, 2009).

The Court may grant an injunction to “prevent the violation of any right secured by patent.” 35 U.S.C. § 283. “The decision to grant a preliminary injunction is within the discretion of the district court.” *Purdue Pharma L.P. v. Boehringer Ingelheim GmbH*, 237 F.3d 1359, 1363 (Fed. Cir. 2001); *Abbott Labs. v. Sandoz, Inc.*, 566 F.3d 1282, 1298 (Fed. Cir. 2009); *see also eBay, Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391 (2006) (with respect to the closely related topic of permanent injunctions, the Supreme Court recently noted that “[t]he decision to grant or deny permanent injunctive relief is an act of equitable discretion by the district court, reviewable on appeal for abuse of discretion”).

“A district court may enter a preliminary injunction based on its consideration of four factors: (1) the likelihood of the patentee’s success on the merits; (2) irreparable harm if the injunction is not granted; (3) the balance of hardships between the parties; and (4) the public interest.” *Abbott Labs.*, 566 F.3d at 1298 (internal citations omitted) (citing *Erico Int’l Corp. v. Vutec Corp.*, 516 F.3d 1350, 1353–54 (Fed. Cir. 2008)).

To establish likelihood of success on the merits, the patentee seeking preliminary injunction must show that it will likely prove infringement, and that it will likely withstand any challenges to the validity of the patent. *Titan Tire Corp. v. Case New Holland, Inc.*, 566 F.3d 1372, 1376 (Fed. Cir. 2009); *see Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1364 (Fed. Cir. 1997). “An accused infringer ‘can defeat a showing of likelihood of success on the merits by demonstrating a substantial question of validity or infringement.’ ” *Tinnus.*, 846 F.3d at 1202 (citing *Aria Diagnostics, Inc. v. Sequenom, Inc.*, 726 F.3d 1296, 1304 (Fed. Cir. 2013)).

The test for infringement at the preliminary injunction stage is the same as the usual test set forth in *Graver Tank & Mfg. Co., Inc. et al. v. Linde Air Prod. Co.*, which requires that the accused device be evaluated in light of the properly construed claim. *Graver*, 339 U.S. 605

(1950); *see Pfizer, Inc. v. Teva Pharms. USA, Inc.*, 429 F.3d 1364, 1372 (Fed. Cir. 2005). In showing a likelihood of success on a claim of infringement, a patentee “is entitled to rely on circumstantial evidence to establish infringement.” *Tinnus*, 846 F.3d at 1204. However, demonstrating likelihood of success on the merits does not lead to a presumption of irreparable harm. *Robert Bosch LLC v. Pylon Mfg. Corp.*, 659 F.3d 1142, 1149 (Fed. Cir. 2011) (citing *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006)) (“We take this opportunity to put the question to rest and confirm that *eBay* jettisoned the presumption of irreparable harm as it applies to determining the appropriateness of injunctive relief.”)

With respect to validity, the presumption of validity under 35 U.S.C. § 282 “is sufficient to establish a likelihood of success on the validity issue, absent a challenge by the accused infringer.” *Tinnus*, 846 F.3d at 1205. “Where the alleged infringer attacks the validity of the patent, the burden is on the challenger to come forward with evidence of invalidity, which the patentee must then rebut. *Id.* (internal quotations omitted). “[I]f the alleged infringer raises a substantial question concerning validity, *i.e.*, asserts an invalidity defense that the patentee cannot prove ‘lacks substantial merit,’ the preliminary injunction should not issue.” *Helifix Ltd. V. Block-Lok, Ltd.*, 208 F.3d 1339, 1351 (Fed. Cir. 2000). “Vulnerability is the issue at the preliminary injunction stage, while validity is the issue at trial. The showing of a substantial question as to invalidity thus requires less proof than the clear and convincing showing necessary to establish invalidity itself.” *Abbott Labs. v. Andrx Pharms., Inc.*, 452 F.3d 1331, 1335 (Fed. Cir. 2006); *Amazon.com Inc. v. Barnesandnoble.com*, 239 F.3d 1343, 1358 (Fed. Cir. 2001). The party seeking preliminary injunction may support validity “by showing that the patent in suit [has] successfully withstood previous validity challenges in other proceedings. Further support for such

a clear case might come from a long period of industry acquiescence in the patent's validity.”  
*Amazon.com.*, 239 F.3d at 1358 (Fed. Cir. 2001).

Irreparable harm may be demonstrated by showing: (1) infringement has caused or will cause price erosion or loss of market share; (2) deprivation of the exclusive right to the patented invention; or (3) that the accused infringer is incapable of paying a damages award. *Bosch*, 659 F.3d at 1156. Loss of revenue and goodwill may also be “incalculable and irreparable.” *Smith & Nephew, Inc v. Arthrex, Inc.*, No. 2:07-cv-335, 2010 WL 2522428, at \*2–3 (E.D. Tex. Jun. 18, 2010) (citing *i4i Ltd. Partnership v. Microsoft Corp.*, 598 F.3d 831, 861 (Fed. Cir. 2010)). Damage to a reputation as the “sole source” in the United States may also be irreparable harm. *Eli Lilly & Co. v. Generix Drug Sales, Inc.*, 324 F. Supp. 715, 724 (S.D. Fla. 1972), *aff’d*, 460 F.2d 1096 (5th Cir. 1972).

The balance of hardships weighs the “magnitude of the threatened injury to the patent owner . . . in light of the strength of the showing of likelihood of success on the merits, against the injury to the accused infringer if the preliminary decision is in error.” *H.H. Robertson, Co. v. United Steel Deck, Inc.*, 820 F.2d 384, 390 (Fed. Cir. 1987). “Although the public interest inquiry is not necessarily or always bound to the likelihood of success of the merits, in [many cases,] absent any other relevant concerns . . . the public is best served by enforcing patents that are likely valid and infringed.” *Abbott Labs. Inc.*, 452 F.3d at 1348.

## DISCUSSION

### I. Likelihood of Success on the Merits

To succeed on the first preliminary-injunction factor, Plaintiffs must show that they will likely prove that the Easy Einstein Balloons infringe the patents-in-suit and that the infringement

claim will likely withstand Telebrands's validity challenges to patents-in-suit. *See Amazon.com*, 239 F.3d at 1350.

### **A. Infringement**

Plaintiffs contend that it is more likely than not that Telebrands's Easy Einstein Balloons infringe the patents-in-suit. Docket No. 41 at 6. An infringement analysis involves the two-step process of "construing the claims and comparing the properly construed claims to the accused product." *Advanced Steel Recovery, LLC v. X-Body Equip., Inc.*, 808 F.3d 1313, 1316 (Fed. Cir. 2015).

#### **1. The '282 Patent**

The '282 Patent contains one independent claim, claim 1, which recites:

1. An apparatus comprising:  
a housing comprising an inlet and a plurality of outlets;  
a plurality of hollow tubes, each hollow tube attached to the housing at a respective one of the outlets;  
a plurality of containers, each container removably attached to a respective one of the hollow tubes;  
and a plurality of elastic fasteners, each elastic fastener clamping a respective one of the plurality of containers to a respective tube, and each elastic fastener configured to restrict detachment of its respective container from its respective tube and to automatically seal its respective container upon detachment of the container from its respective tube, the restriction of each elastic fastener being sufficiently limited to permit its respective container to detach from its respective tube upon one or more of (1) at least partially filling the container with fluid and (2) shaking the housing;  
wherein the apparatus is configured to fill the containers substantially simultaneously with fluid;  
and wherein at least first and second ones of the plurality of containers are disposed sufficiently close to each other such that they press against each other, regardless whether the first and second ones of the plurality of containers are in a filled state or an unfilled state.

'282 Patent at 6:35–48.

Plaintiffs contend that the Easy Einstein Balloons literally infringe claims 1–3 of the '282 Patent. Docket No. 41 at 5; Docket No. 41-7, Declaration of Barry M. Kudrowitz ("Kudrowitz

Decl.”) at 16–32. In support, Plaintiffs submit an expert declaration of Barry M. Kudrowitz, which provides Dr. Kudrowitz’s opinions as to why each limitation of the asserted claims of the ’282 Patent are met by features of the Easy Einstein Balloons. *Id.* To show that each claim limitation is met, Dr. Kudrowitz submits a claim chart that includes images of the Easy Einstein Balloons from the Easy Einstein Balloons website, actual photographs of the products, images from the product instruction manual, and other screenshots of the website and related product videos. Kudrowitz Decl. at 9–25. Dr. Kudrowitz identifies each alleged infringing feature of the Easy Einstein Balloons to each limitation of the asserted claims of the ’282 Patent. *Id.* In addition, at the hearing on the preliminary injunction, Dr. Kudrowitz provided testimony regarding infringement. Docket No. 43 (“Hr’g Tr.”) at 23:6–49:21. Plaintiffs also submitted the actual Easy Einstein Balloons as evidence of infringement.

Plaintiffs argue that the only difference between the Easy Einstein Balloons and Telebrands’s previously enjoined products is the addition of a silicone “inner elastic fastener” between the neck of the balloon and the tube. Docket No. 41 at 6; Docket No. 52 at 1. Plaintiffs contend that the PVC “outer elastic fastener,” or “cap,” performs each of the limitations required of the “elastic fastener” in the ’282 Patent, regardless of the addition of the “inner elastic fastener.”

First, Plaintiffs state that the PVC cap is configured to “automatically seal its respective container upon detachment.” Docket No. 52 at 1. Plaintiffs argue that testing from both parties’ experts confirm that the PVC cap seals the balloons, either by preventing the balloons from failing during filling or by preventing the successfully-filled balloons from leaking out more quickly. *Id.* Plaintiffs further argue that Telebrands’s explanation of the PVC cap’s function—“to maintain the plug in the same position within the neck of the balloon so that the valve, when closed, prevents water from escaping”—concedes that the cap is configured to automatically seal the balloons

because preventing water from escaping is “almost the very definition of ‘seal.’ ” *Id.* (citing Docket No. 49 at 3, n. 1).

Plaintiffs next argue that the PVC cap “clamps” the balloons to their respective tubes. *Id.* at 2. Plaintiffs argue that the failures of the balloons that had their caps removed during the expert’s experiments show that the PVC fastener provides a clamping force that is exerted on the tube. *Id.* Plaintiffs state that the addition of the silicone “inner elastic fastener” between the neck of the balloon and the tube should not alter the infringement analysis because the claims do not require the fastener to clamp the balloons directly to the tube and because the adding of an additional element to an accused product does not avoid infringement. *Id.* (citing *Suntiger, Inc. v. Scientific Research Funding Group*, 189 F.3d 1327, 1336 (Fed. Cir. 1999)).

Finally, Plaintiffs contend that the PVC fastener meets the “restrict[ing] detachment” limitation. *Id.* Plaintiffs cite to an experiment performed by Dr. Kudrowitz that measured the force necessary to remove each balloon from its tube, and argue that because the results of the experiment showed that “about 20% less force was needed to remove balloons without the PVC fastener than was needed to remove the balloons with the PVC fastener,” the PVC fastener restricts the detachment of the balloons. *Id.* Plaintiffs also argue that this is further evidence that the PVC fastener provides a clamping force to the balloons. *Id.*

Defendants contend that the Easy Einstein Balloons are the result of a legitimate design-around effort and that, unlike other water balloon products, Easy Einstein balloons do not use an elastic ring to seal the balloons. Docket No. 49 at 1. Defendants state that Easy Einstein balloons are sealed by a “valve” on an internal “plug,” and that the balloons include an outer PVC cap to hold the plug in the balloon’s neck. *Id.* Defendants contend that the PVC cap does not perform any of the three claimed functions of the “elastic fastener” of the ’282 Patent. *Id.* at 2. Defendants



submit the expert declaration of Dr. Kamrin in support of their non-infringement arguments. Docket No. 49-29.

Defendants first argue that the PVC cap does not “automatically seal its respective container upon detachment.” *Id.* at 3. Defendants state that the PVC cap does not do anything at the time of detachment and thus cannot meet this limitation. *Id.* Defendants contend that the fact that the PVC cap constricts the neck of the balloon to the plug is not enough to meet this limitation because the cap performs this function both before and after detachment. *Id.* The function of the PVC cap, Defendants argue, is to maintain the “plug” in the same position in the neck of the balloon, not to automatically seal the balloons upon detachment. *Id.* Defendants further contend that this limitation is not met because the plug, not the balloon, is what detaches from the tube. *Id.* at 3–4. Finally, at the hearing, Dr. Kamrin stated that his experiments showed that all of the balloons, whether or not they had the PVC cap removed, exhibited leakage, and that he observed no difference in the rate of leakage between capped and uncapped balloons. Hr’g Tr. At 103–107. Dr. Kamrin therefore concluded that the PVC cap does not play a role in sealing the balloons. *Id.* at 107.

Next, Defendants argue that the PVC cap does not clamp that balloon to its respective tube. Docket No. 49 at 4. Defendants support this argument with testimony from Dr. Kamrin that thick-walled cylinders, like the “plug” in the Easy Einstein Balloons, are subject to the principle of “hoop stresses” and that any radial force acting along the entire circumference of the cylinder will dissipate through the hoop, leaving no resulting force at the center of the cylinder. *Id.* Dr. Kamrin further stated at the hearing that in each of the video experiments, the capped and uncapped balloons fell off at roughly the same time, leading him to opine that the PVC cap exerts no force onto the tube. Hr’g Tr. at 109–110.

Finally, Defendants contend that the PVC cap does not “restrict detachment” of the balloon from the tube. Docket No. 49 at 4. Defendants again argue that no radial forces reach the center of the plug and that the PVC cap therefore cannot restrict detachment. Defendants also state that the failure of several balloons in the experts’ experiments, which detached from the plug even though the plug remained on the tube, does not show that the caps restrict detachment. Instead, Defendants argue that the failure only shows that the cap maintains the position of the plug within the neck of the balloon. *Id.* At the hearing, Dr. Kamrin stated that Dr. Kudrowitz’s force test, which purported to show that 20 percent less force was needed to remove uncapped balloons, did not change his opinion that the cap does not restrict detachment. Dr. Kamrin stated that the data from Dr. Kudrowitz’s test contained “far too much noise to make a conclusion.” Hr’g Tr. at 111. Dr. Kamrin stated that he created Monte Carlo simulation with the data from the force test to determine what the probability would be of an uncapped balloon requiring more force for removal than a capped balloon, and he found that 18 percent of the time he pulled two random data points, the force for the uncapped balloon was higher. *Id.* at 119. Dr. Kamrin further stated that if the capped balloons restricted detachment, the uncapped balloons would have fallen off first in the experts’ experiments, and he did not observe this in his review of the videos. *Id.* at 113. Dr. Kamrin therefore concluded that the PVC cap does not restrict detachment of the balloons. *Id.*

The Court, having thoroughly reviewed both Dr. Kudrowitz’s and Dr. Kamrin’s expert reports and all the evidence submitted, finds that Plaintiffs have met their initial burden in showing a likelihood of infringement of the ’282 Patent. The parties’ infringement dispute centers on whether or not the Easy Einstein Balloons’ PVC cap meets the three limitations of the “elastic fastener” in the ’282 Patent.<sup>4</sup> The ’282 Patent requires that the elastic fastener (1) be configured

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<sup>4</sup> Defendants do not dispute Plaintiffs’ assertion that the PVC cap is elastic.

“to automatically seal its respective container upon detachment of the container from its respective tube,” (2) “clamp[] a respective one of the plurality of containers to a respective tube,” and (3) be “configured to restrict detachment of its respective container from its respective tube” ’282 Patent at 6:43–47. The Court will address each limitation in turn.

First, the Court finds that Plaintiffs are likely to show that the PVC cap is “configured . . . to automatically seal its respective container upon detachment of the container from its respective tube.” As Plaintiffs note, the claims do not require the elastic fastener to perform the sealing on its own. Instead, Claim 1 requires that the cap be “configured . . . to automatically seal” the balloon “upon detachment.” ’282 Patent at 6:46–47. Defendants claim that the cap plays no role in the sealing of the balloon, but instead only “maintain[s] the plug in the same position within the neck of the balloon so that the valve, when closed, prevents water from escaping.” Docket No. 49 at 3 n. 1. However, the test results from both experts show that without the PVC cap, the balloons frequently fail to seal. Indeed, in almost every test submitted to the Court, at least one uncapped balloon failed by falling off its plug, which remained connected to the tube. *See, e.g.*, Docket No. 41-5 (showing two videos of tests done by Dr. Kudrowitz where at least one balloon fails in this manner); Docket No. 22-7 (Exhibit G) (showing a test by Dr. Kamrin where one balloon fails in this manner); Docket No. 49-29 (Declaration of Dr. Kamrin stating that in one test “one balloon without a PVC cap fell off the plug before filling with water” and that in another test two of the uncapped balloons “malfunctioned”). Further, as Dr. Kudrowitz’s experiment shows, the uncapped balloons frequently leak out water at a faster rate than the balloons with caps. *See* Kudrowitz Decl. at 10–15.

Defendants’ argument that the cap does not meet this limitation because it functions in the same way before and after detachment is unpersuasive. If the Court accepted this argument, then

even the O-ring detailed in the patent specification and present in the Bunch O Balloons, Battle Balloons, and Balloon Bonanza products would not practice the limitation, as the O-ring provides a constricting force to the neck of the balloon both before and after the balloon detaches from the tube. Accordingly, the Court finds that Plaintiffs have provided sufficient evidence to show a likelihood of success in proving that the PVC cap meets the “configured . . . to automatically seal” limitation.

Second, the Court finds that Plaintiffs are likely to show that the PVC cap “clamp[s] a respective one of the plurality of containers to a respective tube.” Plaintiffs have presented evidence that the PVC cap exerts a clamping force onto the tube through the inner silicone piece. The Court credits the force-gauge test performed by Dr. Kudrowitz, discussed below, over the theoretical discussion of hoop stresses by Dr. Kamrin. Though the principle of hoop stresses may cause the force exerted by the PVC cap to dissipate, Dr. Kudrowitz’s test shows that at least some of that force is exerted onto the tube. Further, Defendants admit that the PVC cap secures the balloon to the inner silicone piece. Docket No 49 at 4 (“[T]he PVC cap’s function is to maintain the position of the plug within the neck of the balloon.”). Defendants cannot avoid infringement by adding a piece of silicone in between the balloon and the tube. *See Suntiger, Inc. v. Scientific Research Funding Group*, 189 F.3d 1327, 1336 (Fed. Cir. 1999) (“If a claim reads merely on a part of an accused device, that is enough for infringement . . . . Any other reasoning would allow an infringer to avoid infringement merely by adding additional elements to an infringing device.”).

Finally, the Court finds that Plaintiffs are likely to show that the PVC cap is “configured to restrict detachment of its respective container from its respective tube.” In his force-test experiment, Dr. Kudrowitz used a force gauge to measure the amount of force required to remove 100 different balloons from their tubes, 50 with caps and 50 without. Docket No. 52-1 at 2–4. Dr.

Kudrowitz analyzed the data and found that the average capped balloon required 3.38N to remove, while the uncapped balloons required an average of 2.78N to remove—a difference of 0.6N or approximately 20 percent. *Id.* At the hearing, Dr. Kamrin dismissed Dr. Kudrowitz's test results as containing "too much noise." Hr'g Tr. at 111. He further stated that in 18 percent of the tests in Dr. Kudrowitz's experiment, the uncapped balloon required more resistance to remove. *Id.* at 119. Finally, Dr. Kamrin stated that if Dr. Kudrowitz's results were correct, the uncapped balloons should have fallen off 20 percent faster than the capped balloons in each of the tests, and that he did not observe this result when watching the videos of the tests. *Id.* at 113.

The Court credits Dr. Kudrowitz's force-gauge test, and finds it more persuasive than Dr. Kamrin's arguments and tests. Though the test results may contain some amount of "noise," the Court finds the individual measurement of the force required for 100 different balloons to be more reliable than Dr. Kamrin's observations of when certain balloons fell off during a shorter series of tests where only 7 of 25 balloons had their caps removed. Moreover, any problems with sample size present in Dr. Kudrowitz's test are likewise present in Dr. Kamrin's tests. Further, Dr. Kamrin's finding that 18 percent of uncapped balloons required more force to remove than capped balloons shows that 72 percent of capped balloons required more force to remove than uncapped balloons, a number much higher than the 50 percent that could be expected if the caps exerted no force onto the tube. The Court therefore finds that Plaintiffs have provided sufficient evidence to show a likelihood of success in proving that the PVC cap meets this limitation.

Accordingly, the Court finds that Plaintiffs are likely to show that the PVC cap meets the limitations of the "elastic fastener" of the '282 Patent. Defendants have not contested Plaintiffs' assertion that the remaining elements of the Easy Einstein Balloons are the same as the elements that the Court found likely to be infringed in the accused products in Case Nos. 6:15-cv-551 and

6:16-cv-33. Therefore, the Court finds that Plaintiffs have met their burden on showing a likelihood of infringement.<sup>5</sup>

## **2. The '749 Patent**

The '749 Patent has only one claim, which recites as follows:

1. An apparatus comprising:

a housing comprising an opening at a first end and a plurality of holes extending through a common face of the housing at a second end;  
a plurality of hollow tubes, each hollow tube attached to the housing at a respective one of the holes at the second end of the housing;  
a plurality of containers, each container removably attached to a respective one of the hollow tubes;  
and a plurality of elastic fasteners, each elastic fastener clamping a respective one of the plurality of containers to a respective tube, and each elastic fastener configured to restrict detachment of its respective container from its respective tube and to automatically seal its respective container upon detachment of the container from its respective tube, the restriction of each elastic fastener being sufficiently limited to permit its respective container to detach from its respective tube upon one or more of (1) at least partially filling the container with a fluid and (2) shaking the housing;  
wherein the apparatus is configured to fill the containers substantially simultaneously with the fluid.

'749 Patent at 6:35–57.

The '749 Patent contains the same language as the '282 Patent in regards to the “elastic fasteners” limitation, which is the sole subject of the parties’ dispute in their briefing and argument. The parties make the same infringement and non-infringement arguments for the '282 Patent and the '749 Patent. Therefore, the Court finds that the Easy Einstein Balloons infringe the '749 Patent for the same reasons that it finds that the product infringes the '282 Patent.

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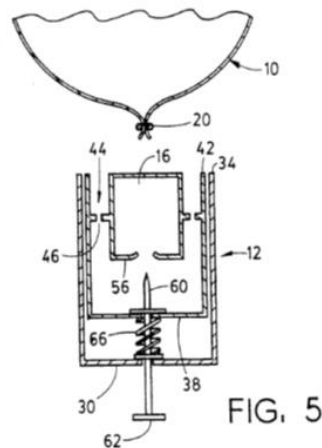
<sup>5</sup> The parties’ presented argument regarding whether or not Easy Einstein Balloons infringes under the doctrine of equivalents. Docket No. 41 at 7–8; Docket No. 49 at 4–8; Docket No. 52 at 2–3. Because the Court finds that Plaintiffs are likely to show literal infringement, the Court does not address the parties’ arguments regarding the doctrine of equivalents.

### **B. Invalidity**

“A patent shall be presumed valid.” 35 U.S.C. § 282; *see also Research Corp. Technologies v. Microsoft Corp.*, 627 F.3d 859, 870 (Fed. Cir. 2010) (“A patent is presumed valid and the party asserting invalidity has the burden of persuasion to show the contrary by clear and convincing evidence.”). This presumption “is sufficient to establish a likelihood of success on the validity issue, absent a challenge by the accused infringer.” *Tinnus*, 846 F.3d at 1205. “Where the alleged infringer attacks the validity of the patent, the burden is on the challenger to come forward with evidence of invalidity, which the patentee must then rebut. *Id.* (internal quotations omitted).

Plaintiffs contend the patents-in-suit are valid and note that this Court previously ruled that Telebrands had failed to raise a substantial question concerning the validity of the ’282 and ’749 patents. Docket No. 41 at 9. Therefore, Plaintiffs argue that the Court need not reconsider this issue. *Id.* Defendants argue that the PTO has already determined that the ’749 and ’282 Patents are more likely than not obvious because the PTAB has instituted post-grant review. Docket No. 49 at 8. Defendants argue that the PTAB’s reasoning is persuasive that the ’749 and ’282 Patents are invalid as obvious over the combination of Saggio, Donaldson, and Cooper. *Id.* at 9.

Here, the Court has previously considered the references of Saggio, Donaldson, and Cooper, on which Defendants rely. Case No. 6:16-cv-33, Docket Nos. 99, 142. First, with respect to Donaldson, the Court explained that the automatic sealing disclosure in Donaldson discloses a mechanical release that includes a firing pin and pressurized gas:

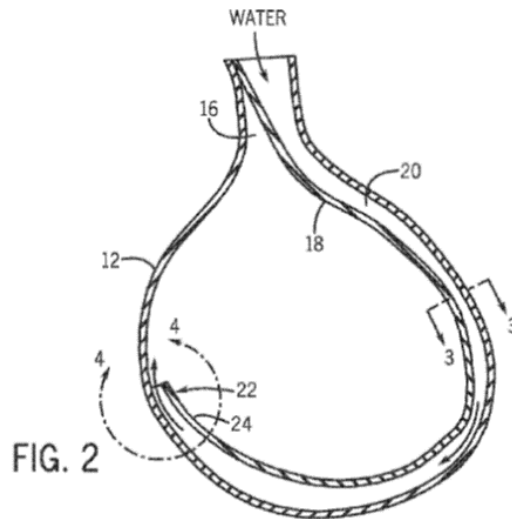


Donaldson at 4:43–52 (“The pressurized gas escapes into the volume 48 and fills that volume. The spring 66 moves the spring pin back into the cocked position with the gasket 70 seated against the inner container bottom adjacent to the hole in that bottom to seal the volume except for the orifices 46. The pressurized gas fills the volume 48 and moves through the orifices 46 into the balloon as indicated in FIG. 4 by the arrows 71’. The O-ring seals the balloon against the escape of this pressurized gas so the balloon inflates . . . .”); *see also* 4:65–5:6 (“This movement causes the inner container wall subadjacent to the upper rim 42 to move downwardly with respect to the outer container wall upper edge 34 thereby causing the surface on which the O-ring 20 is seated to disappear. As soon as this seating surface disappears, the O-ring is released and pulls the balloon off of the device as indicated in FIG. 5.”).

The Court found it unclear how it would be obvious to use such a mechanism to release a plurality of containers filled with fluid such as water by partially filling and/or shaking. Case No. 6:16-cv-33, Docket No. 99 at 16. Rather, the Court found that the mechanical action for release disclosed in Donaldson distinguishes the present invention, as Donaldson does not teach removing the container by partially filling or shaking. *Id.*



As to U.S. Patent No. 5,826,803 (“Cooper”) and U.S. Patent Application US 2013/0118640 (“Saggio”), the Court explained the “neither Cooper nor Saggio appear to disclose the ‘elastic fasteners’ . . . .” Case No. 6:16-cv-33, Docket No. 99 at 22. Both the ’282 and ’749 Patents require each “elastic fastener clamping a respective one of the plurality of containers to a corresponding hollow tube.” ’749 Patent at 6:45–47; ’282 Patent at 6:41–43. The Court found that it is not clear how the inner membrane of Saggio would indeed work to clamp the balloons to the tubes of Cooper and provide the claimed “restriction of each elastic fastener,” particularly when the inner membrane of Saggio extends along nearly the entire inner perimeter of the whole balloon body, as shown below in Figure 2:



Saggio Fig. 2.

Defendants argue that adding water balloons to Cooper’s hollow tubes, and replacing Saggio’s self-sealing membrane with Donaldson’s O-ring are simple substitutions with expected results. Docket No. 49 at 10. But Defendants offer little more than this conclusion for the Court and fail to explain how the inner membrane of Saggio would work to clamp the balloons to the

tubes of Cooper and provide the claimed “restriction of each elastic fastener,” or how Donaldson’s teachings would be understood and applied to containers filled with fluid. In rebuttal, Dr. Kudrowitz argues that because Cooper relates to a sprinkler system, a person of ordinary skill in the art would have had no reason to cover the nozzles (or restrict them) because it would prevent Cooper from operating as a sprinkler.<sup>6</sup> Docket No. 52-1 at ¶ 16, Kudrowitz Declaration (“Kudrowitz Supp. Decl.”). Having thoroughly reviewed these references, the expert declarations and testimony, the Court finds that Defendants have failed to raise a substantial question that the patents-in-suit are obvious in view of these prior art references.

The Court understands that the PTAB has instituted review, but the Court also recognizes that the questions presented in the administrative process are not the same as those before the Court in these injunction proceedings. The PTAB has yet to make a final written decision. Moreover, this Court has considered evidence of secondary considerations that are particularly relevant to the question of obviousness here. For example, Plaintiffs have submitted Telebrands emails [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Further, Plaintiffs provided evidence on the commercial success of their product and cite to evidence that Telebrands’s original allegedly infringing product, Balloon Bonanza, was a #1 seller. *See* Docket Nos. 52-4; 52-5. Ms. Mowbray, Chief Operating Officer

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<sup>6</sup> As this Court has previously discussed, Cooper discloses a lawn and garden sprinkler that may be attached to a garden hose. *See* Case No. 6:15-cv-551, Docket No. 64 at 14; Cooper 2:20–26, Fig. 1.

of ZURU, testified that Bunch O Balloons was the number one selling product in the U.S. in 2016 and also won Toy of the Year that year in the United States, Australia, and at the Nuremberg Toy Fair. Hr’g Tr. at 65:8–24. In addition, Mr. Malone testified at the hearing that it took “several summers” and “multiple years” to develop his patented idea. Hr’g Tr. at 52:5–53:9.

In light of these relevant secondary considerations and the shortcomings in Telebrands’s obviousness combinations, the Court finds that Telebrands has failed to raise a substantial question concerning the validity of the patents-in-suit as obvious.

Because Plaintiffs will likely be able to show that the ’282 and ’749 Patents<sup>7</sup> are valid and infringed, Plaintiffs are likely to succeed on the merits. Thus, the likelihood of success on the merits factor favors granting a preliminary injunction.

## **II. Irreparable Harm**

Plaintiffs argue that the “history of the parties’ dispute as a whole presents compelling circumstantial evidence that Telebrands’s third attempt to knock off Bunch O Balloons will severely harm plaintiffs in 2017 and beyond.” Docket No. 41 at 12. Specifically, Plaintiffs point to the fact that this Court already found irreparable harm occurred to Plaintiffs from Telebrands’s first- and second-generation water balloon products. *Id.* Plaintiffs argue that they and Telebrands directly compete in a two-player market, that there is a likelihood of consumer confusion and loss of mindshare, that price erosion continues to occur, that Telebrands tarnishes Plaintiffs’ reputations as innovators, and that harm to ZURU’s retailer relationships is likely. *Id.* at 12–15. Defendants argue that Plaintiffs cite to no evidence of actual confusion, that Plaintiffs have suffered no loss of mindshare from Telebrands’s presence on the market, that Plaintiffs have

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<sup>7</sup> Because the Court finds the ’282 and ’749 Patents likely to be valid and infringed by the Easy Einstein Balloons product, the Court need not address the infringement and validity arguments of the ’612 and ’779 Patents.

failed to show price erosion, and that the sale of Easy Einstein Balloons will not impact ZURU's relationships with its retailers. Docket No. 49 at 11–15.

Plaintiffs contend that irreparable harm is likely in the absence of an injunction because Telebrands and ZURU are direct competitors in the water-balloon market. Docket No. 41 at 12. Telebrands does not contest that it and ZURU compete in a two-player market for the sale of mass-produced water balloons. As this Court previously noted, the Federal Circuit has repeatedly held that “[d]irect competition in the same market is certainly one factor suggesting strongly the potential for irreparable harm without enforcement of the right to exclude.” *Presidio Components, Inc., v. American Technical Ceramics Corp.*, 702 F.3d 1351, 1363 (Fed. Cir. 2012); *Broadcom Corp. v. Qualcomm Inc.*, 543 F.3d 683, 703 (Fed. Cir. 2008); *see also Douglas Dynamics v. Buyers Prods. Co.*, 717 F.3d 1336, 1345 (Fed. Cir. 2013) (“[w]here two companies are in competition against one another, the patentee suffers the harm—often irreparable—of being forced to compete against products that incorporate and infringe its own patented inventions.”). On this basis alone, Plaintiffs have shown a likelihood of irreparable harm absent an injunction.

Much of the parties' dispute relates to whether ZURU has or will experience price erosion. As this Court previously found, there was an apparent pattern of erosion at both the retail and direct-to-consumer levels from Telebrands's entry to market with its Balloon Bonanza product. Case No. 6:15-cv-551, Docket No. 66 at 15–17. In granting an injunction on the Battle Balloons, the Court also found that it was foreseeable that ZURU could be required to reduce its wholesale prices for 2017 as a result of the continued sales of Telebrands's alleged infringing Battle Balloon products to shared retailers. Case No. 6:16-cv-33, Docket No. 99 at 25. Plaintiffs argue that these patterns will continue with Telebrands's Easy Einstein Balloons entering the market.

Docket No. 41 at 13–14. [REDACTED]

[REDACTED] Docket No. 41-3, Report of Dr. Stan V. Smith (“Smith Rpt.”) at 8–10. Plaintiffs also cite to evidence that direct-to-consumer prices have dropped from \$17.00 in 2014 to \$7.99 for ZURU. *Id.* at 8; Docket No. 52-6 at 15. Plaintiffs also state that Telebrands has provided a double offer online for the Easy Einstein Balloons for \$14.99, making a per balloon price of 7.4 cents per balloon, compared to ZURU’s online price at 9.5 cents per balloon. Docket No. 41 at 12–13.

Defendants contend that Plaintiffs have no actual evidence of price erosion as ZURU has failed to show a dip in wholesale prices and lowered pricing for at least one retailer, in part because that retailer increased its purchase volume. Docket No. 49 at 13. Defendants further challenge Plaintiffs’ expert’s analysis using only four of Plaintiffs’ thirty-eight retail customers as unreliable and move to strike it under *Daubert*. *Id.* at 14. The Court agrees that the evidence presented does not clearly establish that the Easy Einstein Balloons’ presence on the market has caused price erosion to ZURU. However, the Court is aware of, and has written extensively on, the history between ZURU and Telebrands and the results of Telebrands’s presence on the market with an alleged infringing product. As the Court has previously found, a pattern has emerged where Telebrands enters the market offering its products for sale at lower prices, and the price of Plaintiffs’ products come down. Case No. 6:15-cv-551, Docket No. 66 at 15–17; Case No. 6:16-cv-33, Docket No. 99 at 25–26. The evidence presented as to Easy Einstein Balloons suggests this pattern is continuing or is likely to continue.

Plaintiffs further argue Telebrands’s “direct competition has and will continue to tarnish plaintiffs’ ‘status as the innovator[s] in this [mass balloon] market,’ another harm that the Federal Circuit has recognized.” Docket No. 41 at 14, citing *Tinnus*, 846 F.3d at 1208. Plaintiffs cite to the Court’s prior findings in support of their contention that Mr. Malone’s and ZURU’s reputation for inventing and selling innovative products is now diminished because of Telebrands’s poorly-made copycat balloon products. *Id.* (citing Case No. 6:15-cv-551, Docket No. 66 at 19; Case No. 6:16-cv-33, Docket No. 99 at 27). Moreover, at the hearing, Mr. Malone testified that at least one online post stated that his invention was invented by Telebrands. Hr’g Tr. at 55:18–22,

Telebrands has not directly challenged this harm that was previously affirmed by the Federal Circuit on appeal.

Finally, Plaintiffs argue that harm to ZURU's retailer relationships will continue because Telebrands's continued presence in this two-player market has "led to awkward conversations—and compelled the plaintiffs to enforce their patent rights against certain retailer customers." Docket No. 41 at 15. Plaintiffs note that Telebrands and ZURU share many of the same retailer customers and but for Telebrands's presence in the market, Tinnus and ZURU would have never had to enforce their patent rights and would have been building retailer relationships. *Id.*; see Docket No. 41-4, Declaration of Anna Mowbray ("Mowbray Decl.") at ¶ 4 (noting that Fred Meyer is selling Bunch O Balloons for summer 2017 and also just started selling Easy Einstein Balloons). The Court previously noted that at least one shared retailer relationship had been harmed by Telebrands continued presence on the market and Plaintiffs' enforcement of its patent rights. Case No. 6:16-cv-33, Docket No. 99 at 26. Aside from the direct harm that has arisen, it is also foreseeable that sharing retailers for nearly identical products in a predominately two-player market will cause price erosion when negotiating wholesale prices. [REDACTED]

[REDACTED] Hr'g Tr. at 70:18–71:2. As Telebrands continues to share retailers with ZURU, such as Fred Meyer, for the sale of its Easy Einstein Balloons, the likelihood of irreparable harm is high. Moreover, the harm from prevention from coming to market with a monopoly right, from not experiencing a selling season without Telebrands's alleged infringing products also for sale, and from the inability to establish gainful retailer relationships has already occurred.

The Court finds that the harms identified above cannot be undone or compensated with monetary damages. Plaintiffs have already lost out on sole market entry for two summer selling seasons and are now facing the prospect of losing a third summer selling season with the launch of Telebrands's Easy Einstein Balloons. The Court finds that Plaintiffs will likely suffer irreparable harm in the absence of a preliminary injunction. Therefore, this factor also favors granting a preliminary injunction.

### **III. Balance of Hardships**

Plaintiffs contend that the balance of hardships favors granting a preliminary injunction for several reasons: (1) Telebrands (and its affiliate Bulbhead) are large companies with many products, so any harm from the injunction will be minimized; (2) Telebrands took a calculated risk in selling Easy Einstein Balloons when it knew of Plaintiffs' patented inventions; and (3) Mr. Malone and his family rely on the sale of Bunch O Balloons as their primary source of income. Docket No. 41 at 15–16. Defendants do not contest that this factor weighs in favor of a preliminary injunction.

The Court finds that Telebrands was indisputably aware of Plaintiffs' patent rights and made the calculated risk to sell its Easy Einstein Balloons. Indeed, this invention and the Bunch O Balloons product is the livelihood of Mr. Malone and his company Tinnus. Docket No. 41 at 16. Telebrands has numerous "As Seen on TV" products in addition to Easy Einstein Balloons. Mr. Iyer has testified that over the past 30 years, Telebrands has sold several hundred products. Case No. 6:16-cv-33, Docket No. 97, Preliminary Injunction Tr. at 53:16–19. On balance, the irreparable harm that Tinnus and ZURU will suffer in the absence of a preliminary injunction outweighs the harm Defendants would incur. Accordingly, this factor weighs in favor of granting a preliminary injunction.



#### **IV. Public Interest**

Plaintiffs contend there is a strong public interest that favors the enforcement of patents. Docket No. 41 at 16. Defendants do not contest that this factor weighs in favor of a preliminary injunction. As discussed above, Plaintiffs have shown a likelihood of success on the merits. *Abbott Labs. Inc.*, 452 F.3d at 1348 (“[a]lthough the public interest inquiry is not necessarily or always bound to the likelihood of success of the merits, in this case absent any other relevant concerns, . . . the public is best served by enforcing patents that are likely valid and infringed.”). Therefore, the Court finds that this factor also weights in favor of granting a preliminary injunction.

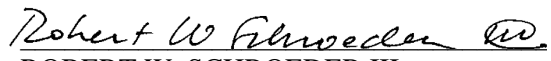
#### **CONCLUSION**

Having found that all four factors weigh in favor of granting a preliminary injunction, Plaintiffs’ Motion for Preliminary Injunction (Docket No. 41) is **GRANTED**.

Within seven (7) days of the issuance of this Order, the parties shall file a notice with the Court as to whether this Order can be unsealed, or request appropriate redaction.

The parties are further **ORDERED** to meet and confer within seven (7) days of the issuance of this Order and submit to the Court a proposed bond amount and injunctive order pursuant to Federal Rule of Civil Procedure 65. To the extent the parties cannot agree on an appropriate bond amount or injunctive order, the parties may submit their disputes to the Court within seven (7) days of the issuance of this Order.

**SIGNED this 19th day of May, 2017.**

  
ROBERT W. SCHROEDER III  
UNITED STATES DISTRICT JUDGE

**TINNUS ENTERPRISES, LLC and  
ZURU LTD.,**

**V.**

## Defendants.

**CIVIL ACTION NO. 6:17-CV-00170-RWS**  
**SEALED**

As an initial matter, Defendants argue that the Court should take no further action on the preliminary injunction until the Court has ruled on Defendants’ Motion to Dismiss for Improper Venue (Docket No. 90). Docket No. 102 at 1–2. Defendants argue that, as a result of *TC Heartland*

*LLC v. Kraft Foods Grp. Brands LLC*, No. 16-341, 2017 WL 2216934, at \*3 (Sup. Ct. May 22, 2017), venue is improper in this district. Docket No. 102 at 1–2. Defendants cite *Chrysler Credit Corp. v. Country Chrysler, Inc.*, 928 F.2d 1509, 1515 n.3 (10th Cir. 1991), *Hendricks v. Bank of Am., N.A.*, 408 F.3d 1127, 1135 (9th Cir. 2005), *Stuart v. Stuart*, No. 3:12-CV-159 CSH, 2012 WL 370089, at \*2 (D. Conn. Feb. 3, 2012) and *Richmond Techs., Inc. v. Aumtech Bus. Sols.*, No. 11-CV-02460-LHK, 2011 WL 2607158, at \*8 (N.D. Cal. July 1, 2011) and state that Plaintiffs’ claims, including the motion for a preliminary injunction, cannot proceed because venue is improper. Docket No. 102 at 2. Defendants contemporaneously filed an Emergency Motion to Stay (Docket No. 91) requesting that the Court stay the entry of this injunction. Defendants’ Motion to Stay is substantially identical to and requests the same relief as their request in their Response to Court’s Order Regarding Form of Injunction (Docket No. 102) for the injunctive order to be stayed. *See* Docket No. 91 at 2–3 and Docket No. 102 at 1–2. The Court will therefore address both the Motion to Stay and the request in the Response to Court’s Order Regarding Form of Injunction together here.

The Court finds that a stay of the entry of this injunction would be inappropriate. Defendants’ request is based on a complex set of motions, including motions relating to venue, transfer, and failure to state a claim, all of which are in the early stages of briefing. Delaying entry of this Order and allowing Defendants to continue selling the Easy Einstein Balloons products while the Court analyzes each of these motions would undermine the purpose of the preliminary injunction against Defendants—to maintain the status quo until the resolution of the litigation. *See Abbott Labs v. Sandoz, Inc.*, 544 F.3d 1341, 1344–45 (Fed. Cir. 2008).

This is especially true given the history of this case. Plaintiffs and Defendants are direct competitors in a two-player market for a seasonal product. Docket No. 89 at 25. Defendants have

launched a new product at the beginning of each summer season for the last three years. *See* Docket No. 1 in Case No. 6:15-cv-551; Docket No. 1 in Case No. 6:16-cv-33; Docket No. 1 in Case No. 6:17-cv-170. Defendants have continued selling their product throughout the entire summer season before being enjoined by this Court. *See* Case No. 6:15-cv-551 (where a motion for preliminary injunction was filed on June 18, 2015 (Docket No. 7), the Magistrate Judge recommended granting the motion on September 11, 2015 (Docket No. 66), Defendants objected to the Magistrate Judge's recommendation on September 25, 2015 (Docket No. 70), this Court adopted the Magistrate Judge's recommendation on December 2, 2015 (Docket No. 84), and an injunctive order was entered on December 22, 2015 (Docket No. 91)); *see also* Case No. 6:16-cv-33 (where a motion for preliminary injunction was filed on May 3, 2016 (Docket No. 19), the Magistrate Judge recommended granting the motion on July 20, 2016 (Docket No. 99), Defendants objected to the Magistrate Judge's recommendation on August 1, 2016 (Docket No. 102), a hearing was held on Defendants' objections on August 23, 2016 (Docket No. 130), this Court adopted the Magistrate Judge's recommendation on September 29, 2016 (Docket No. 142), and an injunctive order was entered on October 31, 2016 (Docket No. 159)); *see also* Case No. 6:17-cv-170 (where motion for preliminary injunction was filed on April 3, 2017 (Docket No. 41), the motion was granted on May 19, 2017 (Docket No. 89), and Defendants requested that the Court stay the entry of the injunctive order on May 26, 2017 (Docket No. 102)). Then, each year, following issuance of the injunction, Defendants have released a slightly altered product at the beginning of the next summer season. *See* Docket No. 1 in Case No. 6:16-cv-33; Docket No. 1 in Case No. 6:17-cv-170. Defendants now seek to repeat this process and to continue to sell, at the height of the summer season, a product against which a preliminary injunction has already been granted while the Court

considers its motions. Allowing this would only add to the irreparable harm that the Court has already found to exist.

The cases cited by Defendants do not compel a different result. In *Chrysler*, the Tenth Circuit held that a district court lacked jurisdiction to clarify its order transferring the case after it had been docketed in the transferee forum. *Chrysler*, 928 F.2d at 1521–22. The Tenth Circuit explained that, unlike transfer under 35 U.S.C. § 1404(a), where venue is proper in both the transferor and transferee forums, transfer under § 1406(a) is mandatory once the district court has determined that venue is improper: “in the case of § 1406(a), the transferor court lacks venue and *must* transfer the action in order for it to proceed.” *Id.* at 1515 n.3 (emphasis original). Unlike in *Chrysler*, the Court in this case has not made a determination on venue, nor has Defendants’ venue motion even been fully briefed. *Chrysler* is therefore inapplicable here.

Further, the defendants in *Stuart* and *Richmond* each raised their venue arguments prior to the Court’s consideration of any preliminary-injunction issues. See *Stuart*, 2012 WL 370089, at \*2; *Richmond*, 2011 WL 2607158, at \*1. Here, however, the Court granted the preliminary injunction against Defendants before Defendants filed the motions that underlie their request to stay the entry of the injunction.<sup>1</sup> See Docket No. 89. Finally, in *Hendricks*, the district court issued a temporary restraining order and a preliminary injunction before reaching a determination on venue, and the Ninth Circuit affirmed. *Id.* at 1132, 1142.

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<sup>1</sup> The Court notes that Defendants filed a “Contingent Motion to Dismiss for Improper Venue” (Docket No. 68) after the hearing on the motion for preliminary injunction but prior to the Court’s granting of the injunction. However, in their contingent motion, Defendants did not move to dismiss for improper venue, but instead stated that “[u]nder present Federal Circuit venue law, which defendants recognize that this Court is bound to apply, venue is appropriate. . . . [I]f the Supreme Court rules in *TC Heartland* that the venue rule stated in *Fourco* applies to patent cases, Defendants move this Court to dismiss for improper venue.” Docket No. 68 at 2. Defendants did not ask this Court to dismiss the action for improper venue, but instead asked the Court “simply to hold the matter in abeyance pending [the Supreme Court’s] ruling . . . .” *Id.* at 3. Therefore, the Court could not have dismissed or transferred the case until Defendants filed their Motion to Dismiss (Docket No. 90) on May 26, 2017, one week after the Court granted the injunction (Docket No. 89).

Accordingly, the Court **DENIES** Defendants' request to stay the issuance of this Order and **DENIES** Defendants' Emergency Motion to Stay (Docket No. 91).<sup>2</sup>

The parties present two main disputes with respect to the issuance of the injunctive order: (1) whether Bed Bath & Beyond should be permitted to sell off its remaining inventory; and (2) whether the bond should be set at [REDACTED]

First, regarding Defendants' request that Bed Bath & Beyond be permitted to sell through its remaining inventory, the Court sees no reason to grant such a request. Defendants summarily repeat their invalidity and non-infringement arguments and argue that Bed Bath & Beyond purchased its current inventory in "good faith," stating that "[t]he fact that the [C]ourt has found that the PVC cap . . . is an elastic fastener is, at a minimum, heavily debatable." Docket No. 102 at 6. The Court is unaware of—and Defendants fail to cite to—any authority that permits an exception to a preliminary injunction on a showing of "good faith." Further, to the extent that Defendants argue the underlying merits of the motion for a preliminary injunction, the Court has already rendered a decision on that motion. *See* Docket No. 89 at 30 ("Having found that all four factors weigh in favor of granting a preliminary injunction, Plaintiffs' Motion for Preliminary Injunction (Docket No. 41) is GRANTED."). The Court therefore **DENIES** Defendants' request.

Second, with respect to the bond amount, Telebrands requests the bond be set at [REDACTED], which Defendants estimate would cover the financial losses they would suffer if later found to be improperly enjoined. Docket No. 102 at 3–4. Plaintiffs assert that a bond of [REDACTED] would be appropriate. Docket No. 100 at 2. Defendants bear the burden of showing the extent of their injury resulting from an injunction prohibiting the sale or offering for sale of the Easy Einstein

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<sup>2</sup> Defendants' Motion to Stay substantively addresses only whether the Court should delay entry of the injunctive order, which the Court has addressed in this Order. *See* Docket No. 91. This Order does not prejudice Defendants' ability to file a motion to stay any other aspect of the proceedings in this case, though the Court notes that there are no pending deadlines and that a scheduling order has not yet been entered.

products. *See Oakley, Inc. v. Sunglass Hut Int'l*, No. SA CV 01-1065 AHS, 2001 WL 1683252, at \*12 (C.D. Cal. Dec. 7, 2001), *aff'd on other grounds*, 316 F.3d 1331 (Fed. Cir. 2003) (“A successful movant for a TRO or preliminary injunction must post security ‘for the payment of such costs and damages as may be incurred or suffered by any party who is found to have been wrongfully enjoined or restrained.’ It is Defendants’ burden to reasonably estimate the extent to which they would be damaged if this preliminary injunction were improvidently granted.” (quoting FED. R.CIV. P. 65(c)). “The amount of a bond is a determination that rests within the sound discretion of a trial court.” *Sanofi-Synthelabo v. Apotex, Inc.*, 470 F.3d 1368, 1386 (Fed. Cir. 2006).

Here, Telebrands asserts that it would suffer [REDACTED] in losses if wrongly enjoined. Docket No. 102 at 5. Telebrands has submitted a declaration of its Executive Vice President and COO, Bala Iyer, in support of its proposed portion of the bond. Docket No. 102-1. Telebrands states that it has sold [REDACTED] of Easy Einstein Balloons so far this year and estimates that it would sell another [REDACTED] this year if not for the injunction, leading to a loss of [REDACTED]. *Id.* at ¶¶ 13–14. Telebrands also contends that sales of the Easy Einstein Balloons in 2018 would mirror those of the Battle Balloons in 2016 and that it would therefore lose sales of [REDACTED] of Easy Einstein Balloons in 2018 for a loss of approximately [REDACTED]. *Id.* at ¶ 11. Telebrands therefore estimates its total loss to be [REDACTED]. *Id.* at ¶ 16.

Bed Bath & Beyond has submitted a declaration of its employee, James Seymour, in support of its proposed portion of the bond. Docket No. 102-2. Bed Bath & Beyond states that its total retail sales of the Easy Einstein Balloons product so far this year has been approximately [REDACTED]. *Id.* at ¶ 7. Bed Bath & Beyond estimates that, because it sold [REDACTED] of balloons last year and expects a yearly decrease in revenue for these products of [REDACTED], it would

generate another [REDACTED] in revenue on the product the rest of this year. *Id.* at ¶ 5–7. Based on these retail numbers and their estimated margin of approximately [REDACTED], Bed Bath & Beyond estimates that it will lose approximately [REDACTED] in profits this year as the result of the injunction. *Id.* at ¶ 9. Bed Bath & Beyond also contends that sales of the Easy Einstein Balloons in 2018 would decrease another [REDACTED], and that it would therefore have generated [REDACTED] in revenue on the product in 2018 for a loss of [REDACTED] in profits. *Id.* at ¶ 10. Bed Bath & Beyond therefore [REDACTED]. *Id.* at ¶ 11.

Plaintiffs argue that Defendants have failed to meet their burden of showing a rational basis for the proposed bond amount. Docket No. 100 at 4. Plaintiffs argue that while Telebrands here states that its Battle Balloons product made a substantial profit in 2016 in order to support its proposed bond amount, Telebrands's own documents in Case No. 6:16-cv-33, a case between these same parties over the Battle Balloons product, state that the Battle Balloons product produced a net loss of [REDACTED]. *Id.* at 5. Plaintiffs state that Telebrands's inconsistent numbers are not reliable and cannot support a bond amount. *Id.* at 6. Plaintiffs further contend that while Telebrands has based its projected losses on Battle Balloons revenues for 2016, Telebrands has not shown any rational basis to use those numbers for the Easy Einstein Balloons product, which has underperformed its predecessor to date and which Telebrands has stated is substantially different from the Battle Balloons product. *Id.* at 6–7. Plaintiffs also argue that Telebrands should not have based its bond amount on two years' worth of sales, as the bond amounts for each of the two prior preliminary injunctions entered against Telebrands in the related cases in this Court were based off a single year's sales. *Id.* at 7.

Plaintiffs also argue that Bed Bath & Beyond's portion of the proposed bond amount is unsupported. Plaintiffs contend that Bed Bath & Beyond's methodology for calculating its bond



amount is based on the same flawed methodology used by Telebrands. *Id.* Plaintiffs further argue that in the related cases, Telebrands stated that it would provide credits to retailers that returned products based on the injunction, which, if offered here, would eliminate any losses to Bed Bath & Beyond. *Id.* at 8.

Plaintiffs argue that the bond amount should be set at [REDACTED] because neither Defendant has met its burden of supporting its proposed bond amount. *Id.*

The Court credits Mr. Iyer's estimation of Telebrands's sales of Easy Einstein Balloons for the remainder of 2017. Further, the Court notes that a trial date has not yet been set for this case. In each of the related actions, the trial date was set approximately 18 months from the scheduling conference. Therefore, the Court finds it appropriate to include projected lost sales from 2018 in the calculation for the bond amount.

However, the Court finds Telebrands's projections for its 2018 sales to be unsupported. Telebrands's calculations for its lost profits in 2018 rely on an assumption that 2018 sales of the Easy Einstein Balloons product will mirror the 2016 sales of the Battle Balloons product. While the Court notes that the Easy Einstein Balloons sales may have suffered some this year due to a recall on the product—an event that is unlikely to be repeated in 2018—the Court finds Telebrands's estimation for 2018 sales to be overly speculative. The Easy Einstein Balloons product is [REDACTED]

[REDACTED] Therefore, the Court will base Telebrands's projected lost profits for 2018 on its projected profits for the Easy Einstein Balloons product in 2017.

Telebrands estimates that it would sell a total of [REDACTED] units of Easy Einstein Balloons in 2017 absent an injunction. Docket No. 102-1 at ¶¶ 13–14. As Telebrands has already sold approximately [REDACTED] in 2017, *see id.* at ¶ 13, the Court finds that Telebrands is likely to lose [REDACTED] in 2017 and [REDACTED] sales in 2018. Based on Telebrands’s estimated average price of [REDACTED] per unit and [REDACTED] profit margin, Telebrands would lose approximately [REDACTED] on the [REDACTED] lost in 2017 and approximately \$2.6 million on the 1.5 million units lost in 2018. Accordingly, the Court finds that Telebrands has shown that it is reasonably likely to suffer a total of approximately [REDACTED] in losses due to this injunction.

As to Bed Bath & Beyond, the Court finds that its proposed bond amount is unsupported. Bed Bath & Beyond bases its bond amount entirely on sales numbers for the Battle Balloons product from 2016 and ignores the sales data it has for the Easy Einstein Balloons product for this year. Bed Bath & Beyond states that its total retail sales of this year for Easy Einstein Balloons, which first went on sale in March, is [REDACTED]. Docket No. 102-2 at ¶ 7. It is unclear to the Court why retail sales for the second half of 2017—which Bed Bath & Beyond estimates to be [REDACTED]—would equal almost the total sales for Battle Balloons in 2016—[REDACTED]—especially given that Bed Bath & Beyond estimates that sales for the products will decline with time. *See Id.* Therefore, the Court will assume that Bed Bath & Beyond’s sales of Easy Einstein Balloons will continue at the current pace, approximately [REDACTED] per three-month period, for a total revenue of approximately [REDACTED] through the end of 2018. Given Bed Bath & Beyond’s estimated profit margin of approximately [REDACTED], the Court finds that Bed Bath & Beyond has shown it is reasonably likely to suffer approximately [REDACTED] in losses due to this injunction.

Accordingly, the Court will set Plaintiffs’ total bond amount at \$4,250,000.

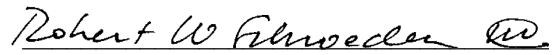
Having considered the parties' submissions and for the reasons set forth in Docket No. 89, it is hereby **ORDERED** as follows:

- The Court **FINDS** that Plaintiffs have carried their burden of showing (a) that Plaintiffs will likely succeed on the merits of their patent infringement claims by showing that U.S. Patent Nos. 9,242,749 ("749 Patent") and 9,315,282 ("282 Patent") are valid and enforceable and that Defendants have infringed the '749 Patent and the '282 Patent, (b) that Plaintiffs have suffered and will continue to suffer irreparable harm if a preliminary injunction is not entered, (c) that the balance of hardships between Plaintiffs and Defendants favors the Plaintiffs, and (d) that the public interest would be served by issuing a preliminary injunction in the present case. *See* Docket No. 89.
- Pursuant to Federal Rule of Civil Procedure 65, 35 U.S.C. § 271, 35 U.S.C. § 283 and the inherent equitable powers of the Court, the Court hereby preliminarily **RESTRAINS AND ENJOINS** Defendants, their officers, agents, servants, employees, attorneys, and all other persons who are in active concert or participation with Defendants who receive actual notice of this Order by personal service or otherwise from making, using, importing, marketing, advertising, offering to sell, or selling in the United States the Easy Einstein Balloons product or any colorable imitation of the same that infringes the '749 Patent and/or the '282 Patent. *See* Fed. R. Civ. P. 65(d).
- This preliminary injunction shall remain in effect until further order of this Court.
- Plaintiffs are directed to file proof of bond in the amount of \$4,250,000 within seven (7) business days of this Order. *See* Fed. R. Civ. P. 65(c). The bond shall serve as security for all claims with respect to this preliminary injunction.

- Within seven (7) days of the issuance of this Order, the parties shall file a notice with the Court as to whether this Order can be unsealed, or request appropriate redaction.

Further, Defendants' Emergency Motion to Stay (Docket No. 91) is **DENIED** for the reasons stated above.

**So ORDERED and SIGNED this 16th day of June, 2017.**

  
ROBERT W. SCHROEDER III  
UNITED STATES DISTRICT JUDGE



US009242749B2

(12) **United States Patent  
Malone**(10) **Patent No.: US 9,242,749 B2**(45) **Date of Patent: \*Jan. 26, 2016**(54) **SYSTEM AND METHOD FOR FILLING  
CONTAINERS WITH FLUIDS**(71) Applicant: **TINNUS ENTERPRISES, LLC**, Plano,  
TX (US)(72) Inventor: **Joshua Malone**, Plano, TX (US)(\*) Notice: Subject to any disclaimer, the term of this  
patent is extended or adjusted under 35  
U.S.C. 154(b) by 0 days.This patent is subject to a terminal dis-  
claimer.(21) Appl. No.: **14/723,953**(22) Filed: **May 28, 2015**(65) **Prior Publication Data**

US 2015/0259085 A1 Sep. 17, 2015

**Related U.S. Application Data**(63) Continuation of application No. 14/492,487, filed on  
Sep. 22, 2014, now Pat. No. 9,051,066.(60) Provisional application No. 61/942,193, filed on Feb.  
20, 2014, provisional application No. 61/937,083,  
filed on Feb. 7, 2014.(51) **Int. Cl.**  
**B65B 3/17** (2006.01)  
**B65B 3/04** (2006.01)  
**B65B 3/28** (2006.01)  
**A61B 10/00** (2006.01)

(Continued)

(52) **U.S. Cl.**  
CPC ..... **B65B 3/17** (2013.01); **A61B 10/0045**  
(2013.01); **A63H 27/10** (2013.01); **B65B 3/04**  
(2013.01); **B65B 3/28** (2013.01); **B65B 7/025**  
(2013.01); **A63H 2027/1033** (2013.01); **A63H**  
**2027/1041** (2013.01)(58) **Field of Classification Search**CPC ..... A63H 27/10; A63H 2027/105; A63H  
2027/1033; A63H 2027/1041; B65B 3/04;  
B65B 3/28USPC ..... 141/10, 114, 234-248; 383/3, 71;  
446/220-226

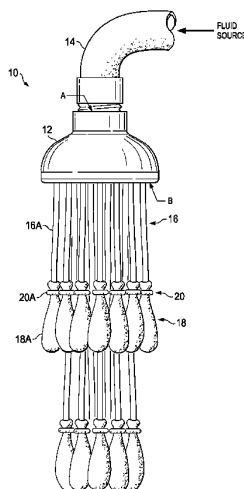
See application file for complete search history.

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FR 2911512 A1 \* 7/2008**OTHER PUBLICATIONS**Search and Examination Report from the United Kingdom Patent  
Office, United Kingdom patent application 1504038.9.

(Continued)

*Primary Examiner* — Kevin P Shaver  
*Assistant Examiner* — Andrew StClair(57) **ABSTRACT**An example embodiment of an apparatus includes a housing  
with an opening at a first end and a plurality of holes at a  
second end, a plurality of hollow tubes attached to the plural-  
ity of holes, a plurality of containers removably attached to  
the hollow tubes, and a plurality of elastic fasteners, each  
elastic fastener clamping each container to a corresponding  
hollow tube, such that when the containers are filled with fluid  
and detached from the corresponding hollow tubes, each elas-  
tic fastener seals each container with the fluid inside.**1 Claim, 6 Drawing Sheets**

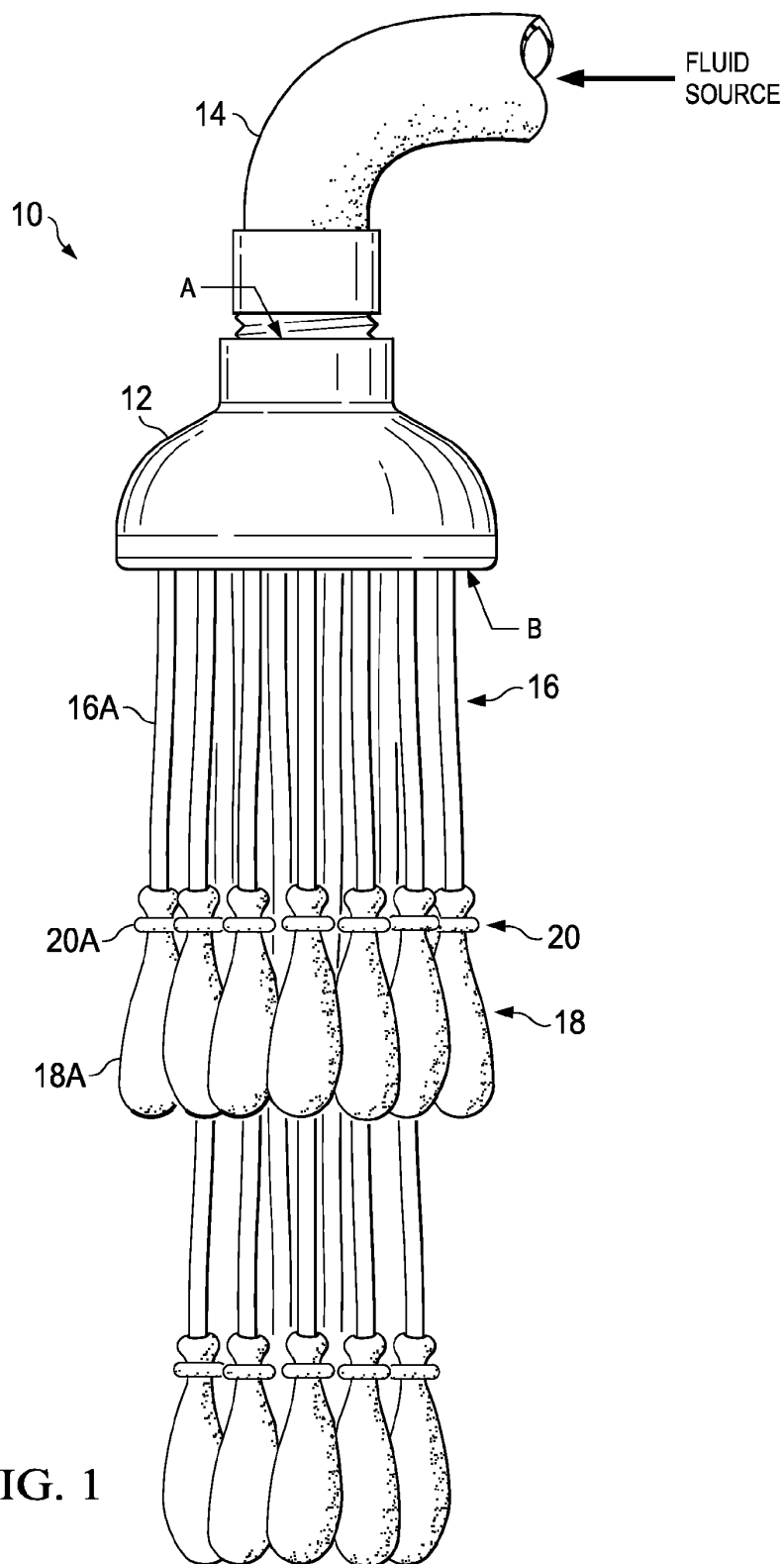


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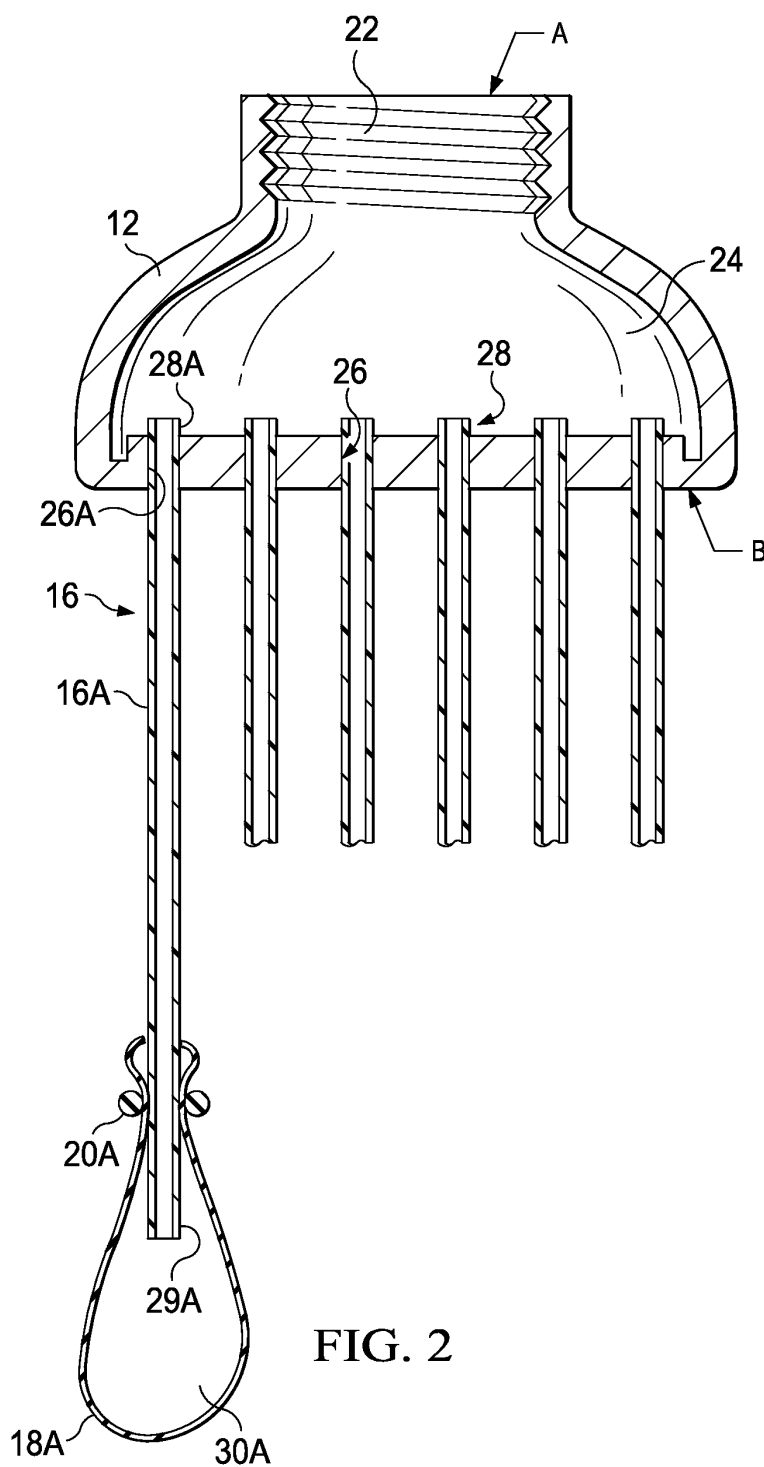


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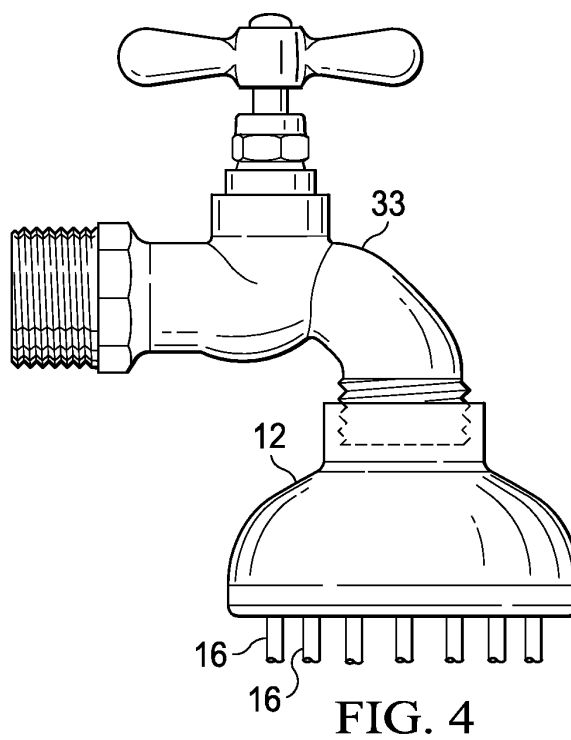
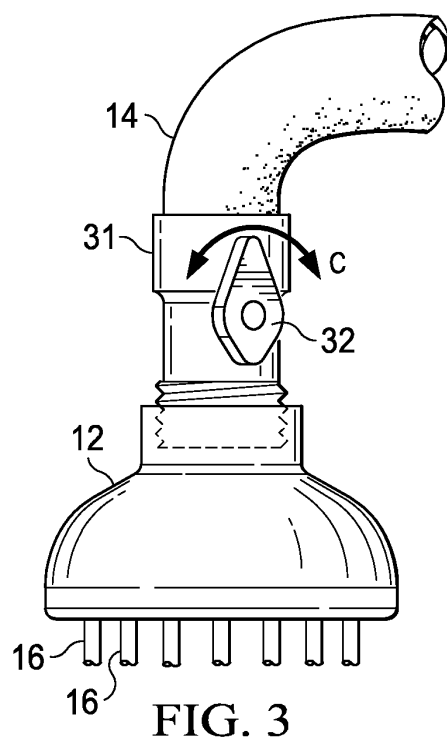


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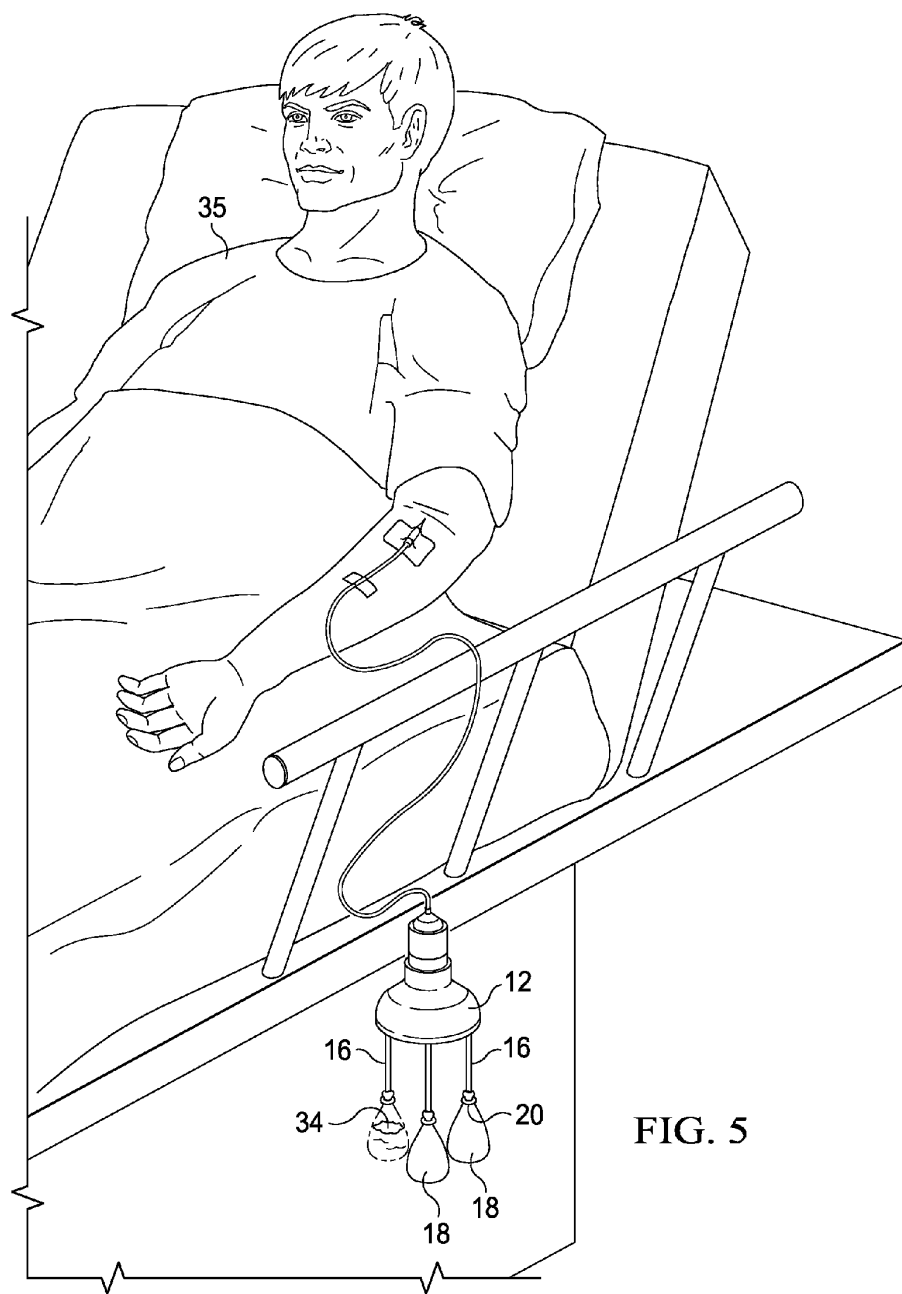


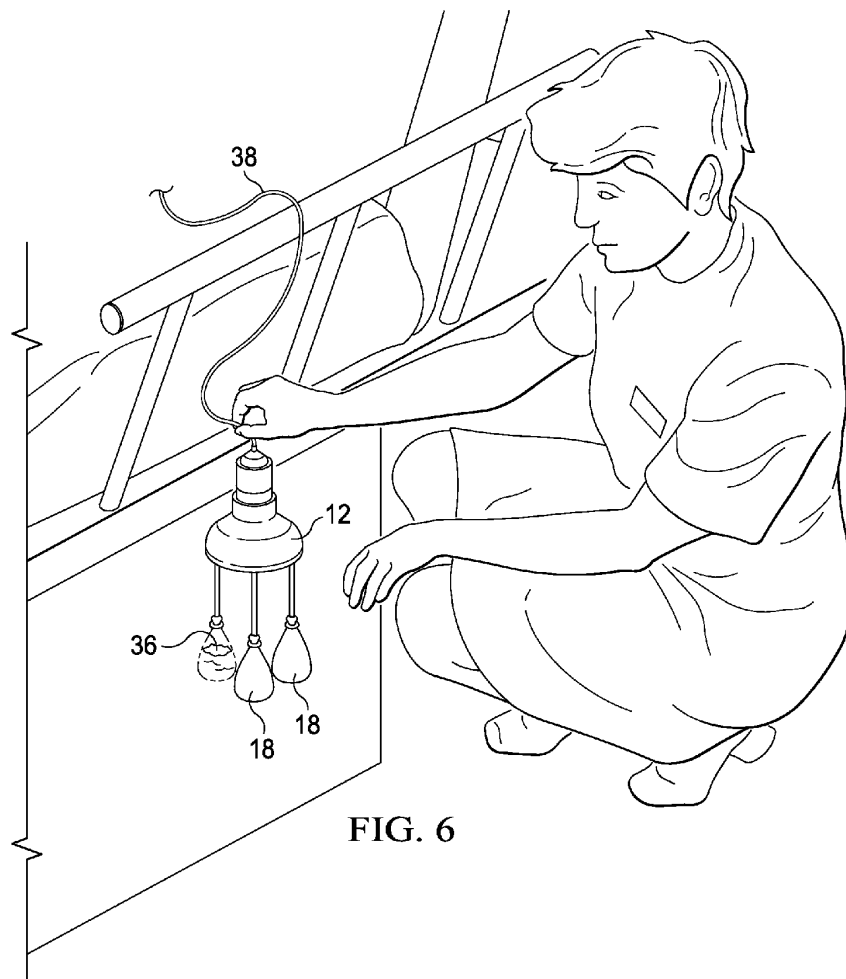
FIG. 5

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**FIG. 6**

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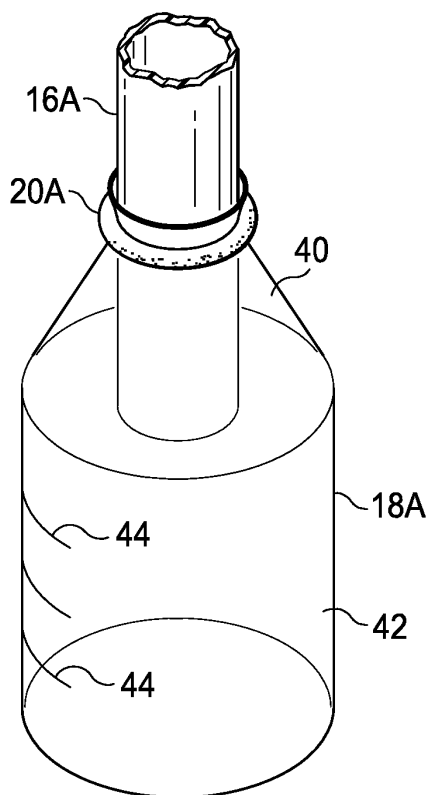


FIG. 7

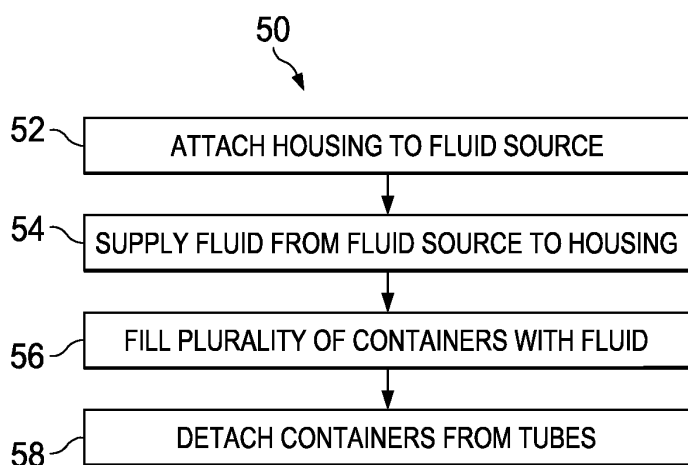


FIG. 8

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SYSTEM AND METHOD FOR FILLING  
CONTAINERS WITH FLUIDSCROSS-REFERENCE TO RELATED  
APPLICATIONS

This is a continuation of and claims the benefit under 35 U.S.C. §120 from U.S. patent application Ser. No. 14/492,487 entitled "SYSTEM AND METHOD FOR FILLING INFLATABLE CONTAINERS WITH LIQUID," filed Sep. 22, 2014, which claims the benefit under 35 U.S.C. §119(e) from U.S. Provisional Application Ser. Nos. 61/937,083 and 61/942,193, filed Feb. 7, 2014 and Feb. 20, 2014, respectively, which applications are all incorporated herein by reference in their entireties.

## TECHNICAL FIELD

The present disclosure relates generally to fluid inflatable systems and more particularly, to a system and method for filling containers with fluids.

## BACKGROUND

Inflatable containers such as balloons can be filled with a variety of fluids, such as air, helium, water, medicines, etc. In some cases, a lot of inflatable containers may need to be filled with fluids. For example, balloons used as props in conventions, large parties, etc. may number in the hundreds and may require substantial human effort to fill them all in a timely manner. In another example, water balloons used as kids' toys may need to be filled in large numbers to aid in various games. Various methods may be employed to fill such inflatable containers. For example, an individual may blow up and tie each balloon by hand or use a tank of compressed air or helium to inflate the balloon, which then has to be tied. In another example, an individual may fill water balloons with water by hand one at a time, and then tie the balloons, which can all be quite time-consuming. Moreover, the inflatable containers may be damaged or filled to different volumes.

## BRIEF DESCRIPTION OF THE DRAWINGS

To provide a more complete understanding of the present disclosure and features and advantages thereof, reference is made to the following description, taken in conjunction with the accompanying figures, wherein like reference numerals represent like parts, in which:

FIG. 1 is a simplified perspective view illustrating an example configuration of an embodiment of a system for filling containers with fluids;

FIG. 2 is a simplified diagram illustrating a cross-sectional view of example details of an embodiment of the system;

FIG. 3 is a simplified diagram illustrating other example details of an embodiment of the system;

FIG. 4 is a simplified diagram illustrating yet other example details of an embodiment of the system;

FIG. 5 is a simplified diagram illustrating yet other example details of an embodiment of the system;

FIG. 6 is a simplified diagram illustrating yet other example details of an embodiment of the system;

FIG. 7 is a simplified diagram illustrating yet other example details of an embodiment of the system; and

FIG. 8 is a simplified flow diagram illustrating example operations that may be associated with an embodiment of the system.

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DETAILED DESCRIPTION OF EXAMPLE  
EMBODIMENTS

## Overview

5 An example embodiment of an apparatus includes a housing (e.g., casing, covering, etc. with a cavity inside) with an opening at a first end and a plurality of holes at a second end, a plurality of hollow tubes attached to the plurality of holes, a plurality of containers (e.g., receptacles, vessels, ampules, test-tubes, balloons, etc.) removably attached to the hollow tubes, and a plurality of elastic fasteners, each elastic fastener clamping each container to a corresponding hollow tube, such that when the containers are filled with fluid and detached from the corresponding hollow tubes, each elastic fastener seals each container with the fluid inside.

## Example Embodiments

It is to be understood that the following disclosure describes several example embodiments for implementing different features, structures, or functions of the system. 20 Example embodiments of components, arrangements, and configurations are described herein to simplify the present disclosure. However, these example embodiments are provided merely as examples and are not intended to limit the scope of the invention.

25 The present disclosure may repeat reference numerals and/or letters in the various exemplary embodiments and across the Figures provided herein. This repetitions is for the purpose of simplicity and clarity and does not in itself indicate a relationship between the various exemplary embodiments and/or configurations discussed in the various Figures.

FIG. 1 is a simplified diagram illustrating an example embodiment of a system 10 for filling containers with fluids. System 10 includes a housing 12 removably attached to a hose 14 (e.g., tube, pipe, etc.) on a first end A and to a plurality of hollow tubes 16 on a second end B. As used herein, the term "housing" encompasses a hollow space enclosed by a rigid or semi-rigid casing (e.g., covering, skin, sleeve, sheath, etc.). In some embodiments, end A may include a threaded opening configured to mate with corresponding threads on hose 14. In some embodiments, end A may be smaller in circumference or area than end B. Hose 14 may be connected to a fluid source, such as a water tank, gas tank, water supply line, etc. on end A. End B may include a plurality of holes (e.g., configured in an array), configured to fit tubes 16. In some 35 embodiments, tubes 16 may be permanently attached (e.g., welded, brazed, stuck with adhesives, press-fitted, etc.) to housing 12. In other embodiments, tubes 16 may be removably attached (e.g., with threads, pressure, etc.) to housing 12.

A plurality of containers 18 may be clamped (e.g., attached, fastened, held, clinched, secured, etc.) to plurality of tubes 16 using elastic valves 20. As used herein, the term "container" refers to an object that can hold something, such as fluids. The term "valve" refers to an object that regulates, directs, or controls the flow of fluids, by opening, closing, or partially obstructing passageways of fluid flow. In an example embodiment, elastic valves 20 comprise elastic fasteners, such as O-rings. In another example embodiments, elastic valves 20 comprise corrugations, smocking, elastic fibers, etc. fabricated into the necks of containers 18 such that force 40 is required to pull open the necks of containers 18, and removal of the force causes the necks to constrict and close. In yet another example embodiment, elastic valves comprise internal or external plugs affixed to the necks of containers 18, through which tubes 16 may be pushed through to clamp containers 18 thereto.

Note that each of containers 18 have an opening to facilitate clamping to tubes 16 and a cavity for containing fluid. For

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example, one end of an example tube 16A may be fitted through a hole in end B of housing 12, and the other end of tube 16A may be inserted into an example container 18A. An example elastic valve 20A (e.g., O-ring, comprising a mechanical gasket typically in a toroid shape; elastic ring, such as a rubber-band) of sufficient size to expand and clamp around tube 16A may be disposed around (e.g., placed over) a neck (e.g., portion just below opening) of container 18A, clamping and sealing container 18A to tube 16A. Thus, elastic valve 20A may be in an open configuration when container 18A is attached to tube 16A; in elastic valve 20A's open configuration, the neck of container 18A is open, allowing container 18A to fill with fluid. After container 18A is filled with fluid, it may be removed from tube 16A, whereupon elastic valve 20A closes, thereby closing the neck of container 18A and sealing the fluid inside.

In one example embodiment, containers 18 may comprise inflatable balloons that may be filled with fluids such as water, air or helium. In another example embodiment, containers 18 may comprise flexible (e.g., stretchy, springy, etc.) elastic containers that may be filled with gaseous or liquid medications. As used herein, the term "elastic" is meant to refer to a property of a material that allows the material to resume its normal shape spontaneously after contraction, dilation, or distortion. In an example, an elastic material may be stretched to 200% of its original length, and the material may return to its original length when the stretching force is removed.

In yet another example embodiment, containers 18 may comprise flexible containers that may be filled with body fluids (e.g., urine, blood) for example, to collect multiple samples simultaneously for testing. Virtually any type and kind of fluid may be used within the broad scope of the embodiments. Note that in some embodiments, containers 18 need not be inflatable or flexible in their entirety. For example, a bottom portion of containers 18 may be inelastic (e.g., glass, plastic, metal, etc., of fixed shape and size), and a top portion may be flexible enough to be inserted around tubes 16 and clamped thereon.

When the fluid source is turned on, fluid may flow through housing 12, tubes 16 and fill containers 18. In some embodiments, when housing 12 is connected to a stream of liquid, containers 18 may be filled with the liquid. In some embodiments, the fluid may be supplied at high pressure. Virtually any mechanism that facilitates fluid flow through tubes 16 at sufficient pressure to fill containers 18 may be used within the broad scope of the embodiments. After containers 18 have reached a desired size or volume, they may be detached from tubes 16. In one example embodiment, filled containers 18 may be detached by pulling them away from tubes 16.

In another example embodiment, the connecting force holding filled containers 18 to tubes 16 may be overcome by an upward acceleration on tubes 16, for example, when they are shaken. Thus, filled containers 18 may be detached by shaking housing 12 (or tubes 16) sufficiently vigorously to cause containers 18 to fall off from tubes 16. In some embodiments, the connecting force holding filled container to its corresponding tube is not less than the weight of the filled container; in a specific embodiment, the connecting force holding each container to its corresponding tube is exactly equal to the weight of the filled container. The connecting force may be provided by a combination of constricting forces and friction forces from elastic valves 20.

In yet other embodiments, containers 18 may fall off under gravity; for example, when filled containers 18 reach a threshold weight, they slip off tubes 16 due to gravity. The threshold weight may be based upon the tightness of elastic valves 20, friction between tubes 16 and containers 18, and force from

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the weight of containers 18 (among other parameters). In various embodiments, containers 14 may slide off tubes 16 and elastic valves 20 may constrict the necks of containers 18, sealing them. In some embodiments, containers 18 may be marked with volumetric measurements, and fluid flow may be turned off when the fluid has filled containers 18 to a desired volume.

In some embodiments, hollow tubes 16 may be made of a rigid material (e.g., steel, glass); in other embodiments, tubes 16 may be made of a flexible material (e.g., thin plastic). In some embodiments, tubes 16 may be thick, short and rigid; in other embodiments, tubes 16 may be slender, long and flexible. Thus, hollow tubes 16 may be flexible, semi-rigid, or rigid, based on its material of construction, design, or a combination thereof. Note that tubes 16 may be of different lengths, for example, to prevent crowding and to accommodate a larger number of containers 18 than would be possible if tubes 16 were of the same length. Thus, at least some of hollow tubes 16 may be of different lengths than the others.

Also, tubes 16 may be flexible to enable containers 18 to expand. Thus, as containers 18 fill with fluid and expand, they may push against each other, flexing tubes 16. The outermost tubes 16 may be flexed more than the innermost tubes 16 (outer and inner being in reference to a center-point of housing 12, with the inner tubes 16 being closer to the center-point, and the outer tubes 16 being farther from the center-point).

Turning to FIG. 2, FIG. 2 is a simplified cross-sectional view of a portion of an embodiment of system 10. Housing 12 comprises a threaded opening 22 at end A, an internal cavity 24, and an array of holes 26 at end B. Internal cavity 24 facilitates distributing the fluid entering at threaded opening 22 to array of holes 26 at end B. In some embodiments, threaded opening 22 may be configured for attaching to a fluid supply hose 14 (e.g., garden hose, plastic tube, etc.). In other embodiments, threaded opening 22 may be attached to corresponding threads in a valve. Array of holes 26 may be configured for connecting first ends 28 of tubes 16 by any suitable means. In some embodiments, first ends 28 of tubes 16 may be connected to corresponding holes 26 by compressing or gluing. In some embodiments, a number of holes 26 in housing 12 and a number of tubes 16 can correspond to a number of containers 18 that are desired to be filled and sealed substantially simultaneously.

To clarify further, only one example tube 16A is shown in the figure. A first end 28A of tube 16A is fitted through a corresponding hole 26A in housing 12. A second end 29A of tube 16A is inserted into container 18A. Elastic valve 20A may be placed around the neck of container 18A clamping the neck to tube 16A. An internal volume 30A of container 18A may be filled with fluid appropriately.

To fill and seal containers 18, housing 12 may be attached to a fluid supply tube (e.g., garden hose) and the fluid supply may be turned on. The fluid enters housing 12, is distributed to holes 26, travels down tubes 16, and fills containers 18. Containers 18 may be filled and may expand substantially simultaneously. When containers 18 have reached a desired size and/or they are filled with the desired volume of fluid, they may be removed from tubes 16. They can be removed by falling off, by shaking them off, by pulling them off by hand, etc. As each container 18A is removed from corresponding tube 16A, respective elastic valve 20A may constrict and close the neck of container 18A, sealing it with the fluid inside.

Turning to FIG. 3, FIG. 3 is a simplified diagram illustrating example details of a valve 31 that may be attached between hose 14 and housing 12 according to an embodiment

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of system 10. One end of valve 31 may be attached to hose 14 and the other end may be attached to threaded opening 22 of housing 12 (e.g., using threads). A lever 32 may be turned from one side (of valve 31) to another (e.g., as indicated by arrow C) to turn on and turn off fluid flow to housing 12. For example, to turn on the fluid flow, lever 32 may be turned to a first position; lever 32 may be turned to a second position (e.g., different from the first position) to turn off fluid flow.

Turning to FIG. 4, FIG. 4 is a simplified diagram illustrating example details of an embodiment of system 10. Housing 12 may be attached to a spigot 33 (e.g., nozzle, faucet, outlet, etc.) that connects to the fluid source. Spigot 33 may be turned on or turned off to start or stop fluid flow to housing 12.

Turning to FIG. 5, FIG. 5 is a simplified diagram illustrating example details of an application of an embodiment of system 10. Embodiments of system 10 may be used in a variety of applications, such as for collecting numerous blood samples substantially simultaneously. Blood 34 may be drawn from a human (or animal) and blood 34 may collect substantially simultaneously in plurality of containers 18. The substantial simultaneous collection of blood in such manner can ease patient pain, speed up sampling time, and enable taking multiple samples substantially simultaneously without cross-contamination from one container to another or messy transfers between containers.

Turning to FIG. 6, FIG. 6 is a simplified diagram illustrating example details of an application of an embodiment of system 10. Embodiments of system 10 may be used in a variety of applications, such as for collecting numerous urine samples substantially simultaneously. Urine 36 may be drawn from a human (or animal) through a suitable catheter 38, and may collect substantially simultaneously in plurality of containers 18.

Turning to FIG. 7, FIG. 7 is a simplified diagram illustrating example details of an embodiment of system 10. Example container 18A may comprise a flexible portion 40 and an inflexible portion 42. Flexible portion 40 may be clamped on to example tube 16A using example elastic valve 20A. In some embodiments, container 18A may comprise volumetric measurement markings 44. When fluid fills container 18A to a desired volume, for example, as indicated by volumetric measurement marking 44, container 18A may be detached from tube 16A, whereupon elastic valve 20A may close container 18A, sealing the fluid inside.

Turning to FIG. 8, FIG. 8 is a simplified flow diagram 50 illustrating example operations that may be associated with an embodiment of system 10. At 52, housing 12 may be attached to a fluid source (e.g., through hose 14, spigot 33, etc.) At 54, fluid may be supplied from the fluid source to housing 12. At 56, plurality of containers 18 may be filled with the fluid. At 58, containers 18 may be detached from corresponding tubes 16.

Note that in this Specification, references to various features (e.g., elements, structures, modules, components, steps, operations, characteristics, etc.) included in "one embodiment", "example embodiment", "an embodiment", "another embodiment", "some embodiments", "various embodiments", "other embodiments", "alternative embodiment",

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and the like are intended to mean that any such features are included in one or more embodiments of the present disclosure, but may or may not necessarily be combined in the same embodiments.

The elements described herein may be made of any suitable materials, including metal (e.g., stainless steel, copper, brass, bronze, aluminum, etc.), plastic, glass, elastomers, or any suitable combination thereof. Each element may also be made of a combination of different materials (e.g., housing and tubes may be made of plastic and containers may be made of elastic rubber; housing and tubes may be made of stainless steel and containers may be made of a combination of glass and flexible plastic; etc.). Any suitable material or combination of materials may be used for the components described herein without departing from the broad scope of the present disclosure.

In addition, the shapes shown and illustrated in the various FIGURES are for example purposes only. Various other shapes may be used herein without changing the scope of the present disclosure. For example, housing 12 may be conical, cylindrical, pyramidal, etc., without departing from the broad scope of the embodiments. Likewise, tubes 16 may be rigid, or flexible 18 without departing from the scope of the broad embodiments.

While the disclosure references several particular embodiments, those skilled in the art will be able to make various modifications to the described embodiments without departing from the true spirit and scope of the disclosure. It is intended that all elements or steps which are insubstantially different from those recited in the claims but perform substantially the same functions, respectively, in substantially the same way to achieve the same result as what is claimed are within the scope of the disclosure.

What is claimed is:

1. An apparatus comprising:

a housing comprising an opening at a first end and a plurality of holes extending through a common face of the housing at a second end;

a plurality of hollow tubes, each hollow tube attached to the housing at a respective one of the holes at the second end of the housing;

a plurality of containers, each container removably attached to a respective one of the hollow tubes; and

a plurality of elastic fasteners, each elastic fastener clamping a respective one of the plurality of containers to a respective tube, and each elastic fastener configured to restrict detachment of its respective container from its respective tube and to automatically seal its respective container upon detachment of the container from its respective tube, the restriction of each elastic fastener being sufficiently limited to permit its respective container to detach from its respective tube upon one or more of (1) at least partially filling the container with a fluid and (2) shaking the housing;

wherein the apparatus is configured to fill the containers substantially simultaneously with the fluid.

\* \* \* \* \*



US009315282B2

(12) **United States Patent  
Malone**(10) **Patent No.:** **US 9,315,282 B2**(45) **Date of Patent:** **\*Apr. 19, 2016**(54) **SYSTEM AND METHOD FOR FILLING  
CONTAINERS WITH FLUIDS**(71) Applicant: **TINNUS ENTERPRISES, LLC**, Plano,  
TX (US)(72) Inventor: **Joshua Malone**, Plano, TX (US)(73) Assignee: **TINNUS ENTERPRISES, LLC**, Plano,  
TX (US)(\*) Notice: Subject to any disclaimer, the term of this  
patent is extended or adjusted under 35  
U.S.C. 154(b) by 0 days.This patent is subject to a terminal dis-  
claimer.(21) Appl. No.: **14/921,212**(22) Filed: **Oct. 23, 2015**(65) **Prior Publication Data**

US 2016/0039547 A1 Feb. 11, 2016

**Related U.S. Application Data**(63) Continuation of application No. 14/723,953, filed on  
May 28, 2015, now Pat. No. 9,242,749, which is a  
continuation of application No. 14/492,487, filed on  
Sep. 22, 2014, now Pat. No. 9,051,066.(60) Provisional application No. 61/942,193, filed on Feb.  
20, 2014, provisional application No. 61/937,083,  
filed on Feb. 7, 2014.(51) **Int. Cl.**  
**B65B 3/17** (2006.01)  
**B65B 3/04** (2006.01)

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(52) **U.S. Cl.**  
CPC ..... **B65B 3/17** (2013.01); **A61B 5/1427**  
(2013.01); **A61B 5/15** (2013.01); **A61B**  
**5/15003** (2013.01);

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(58) **Field of Classification Search**CPC ..... A63H 27/10; A63H 2027/105; A63H  
2027/1033; A63H 2027/1041; B65B 3/04;  
B65B 3/28USPC ..... 141/10, 114, 234-248; 383/3, 71;  
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See application file for complete search history.

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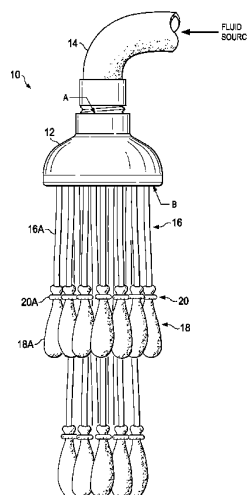
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*Primary Examiner* — Mark A Laurenzi*Assistant Examiner* — Andrew Stclair(57) **ABSTRACT**An example embodiment of an apparatus includes a housing  
with an opening at a first end and a plurality of holes at a  
second end, a plurality of hollow tubes attached to the plural-  
ity of holes, a plurality of containers removably attached to  
the hollow tubes, and a plurality of elastic fasteners, each  
elastic fastener clamping each container to a corresponding  
hollow tube, such that when the containers are filled with fluid  
and detached from the corresponding hollow tubes, each elas-  
tic fastener seals each container with the fluid inside.**3 Claims, 6 Drawing Sheets**



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		(2013.01); <b>B65B 7/02</b> (2013.01); <b>B65B 7/025</b>				267/33
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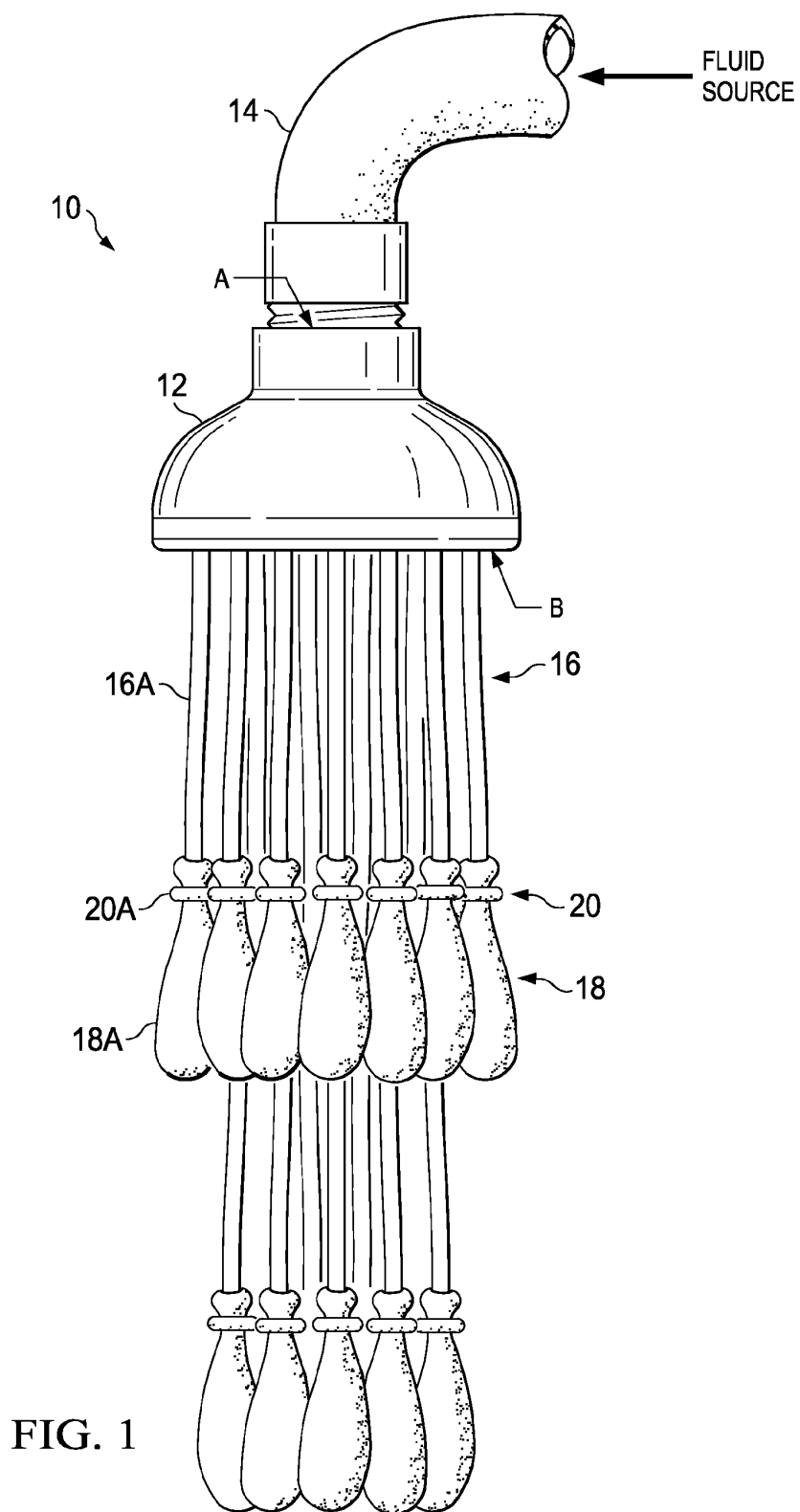
\* cited by examiner

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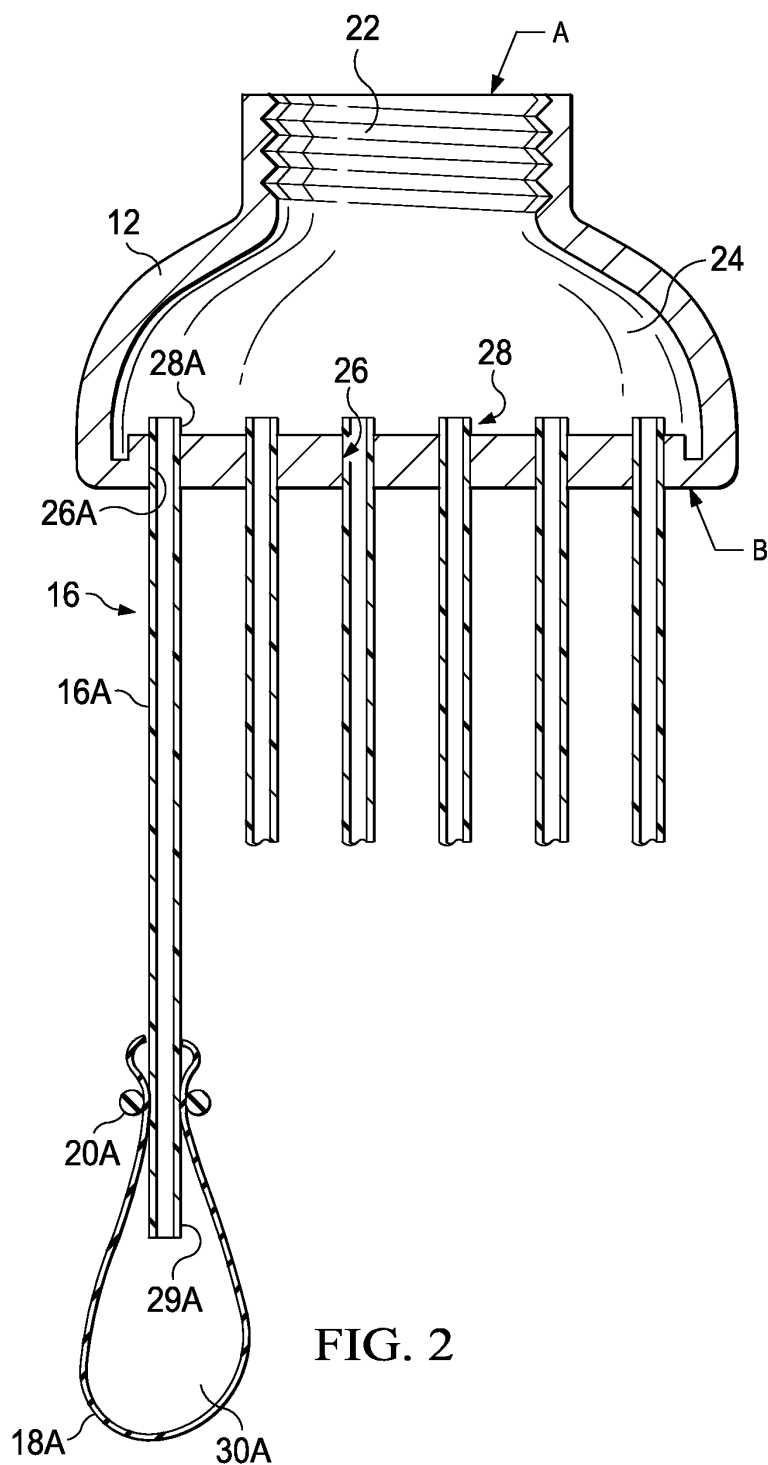


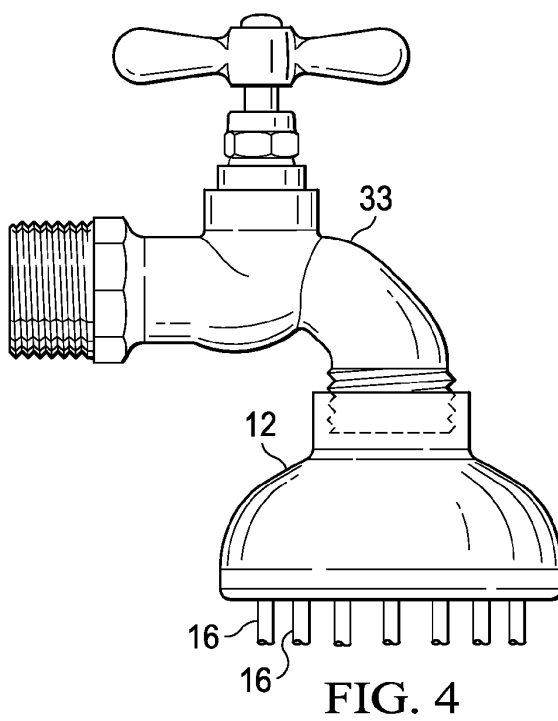
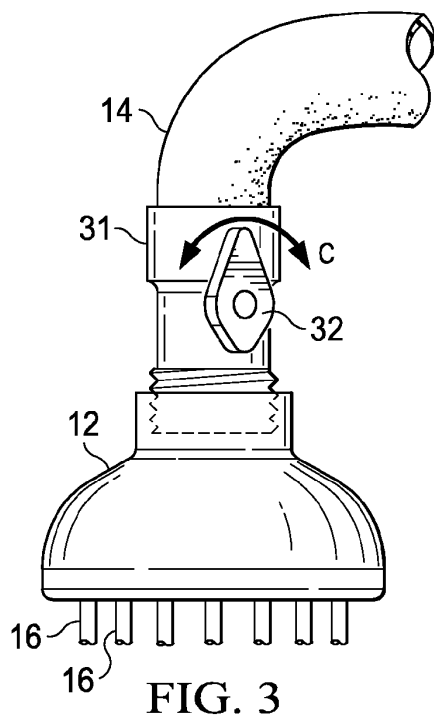
FIG. 2

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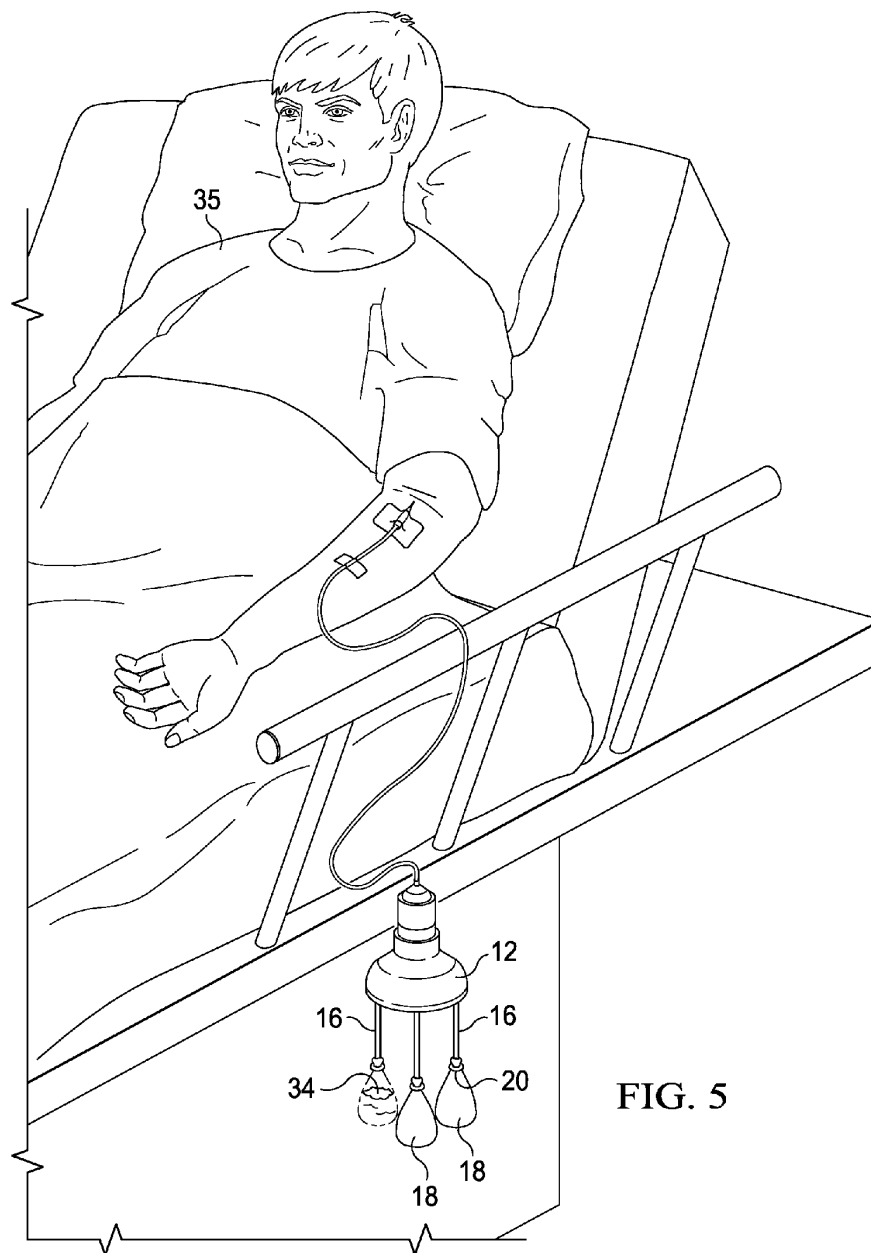


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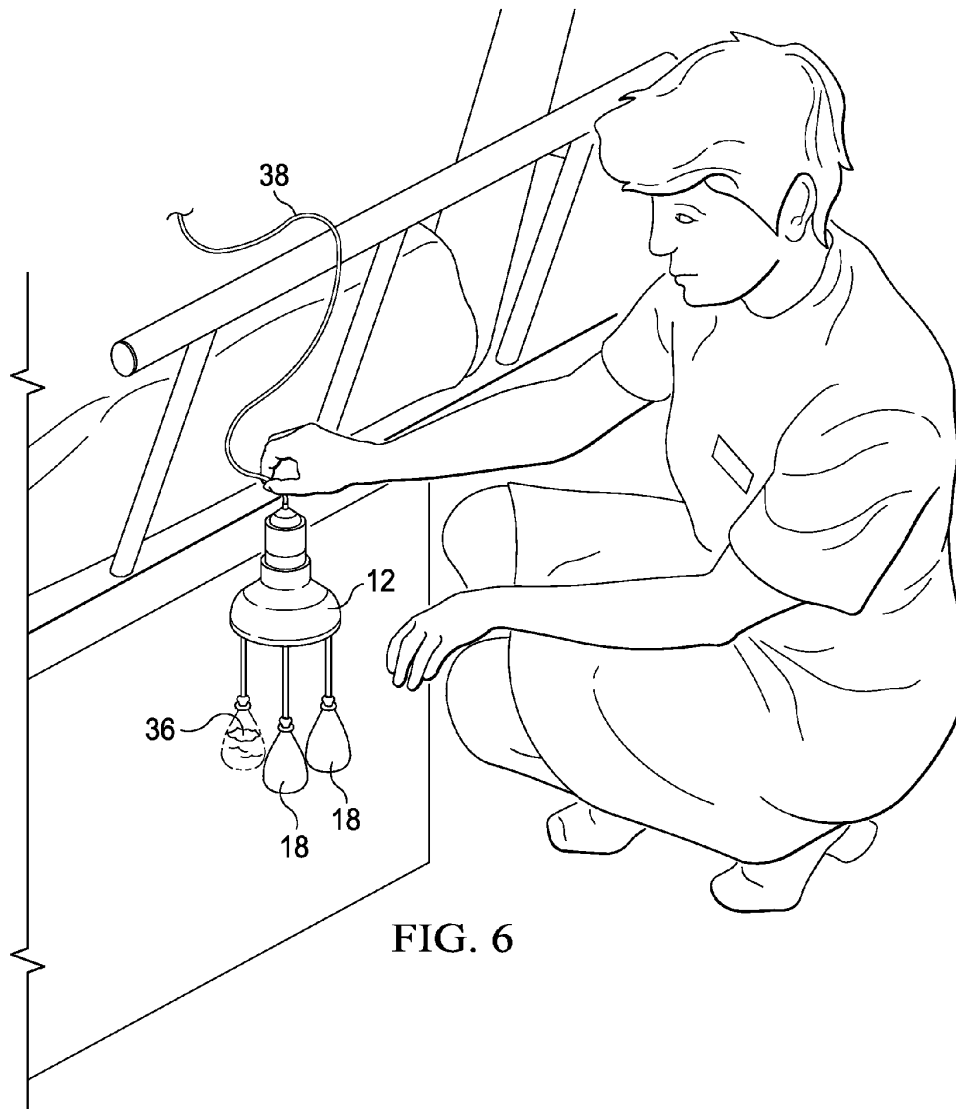


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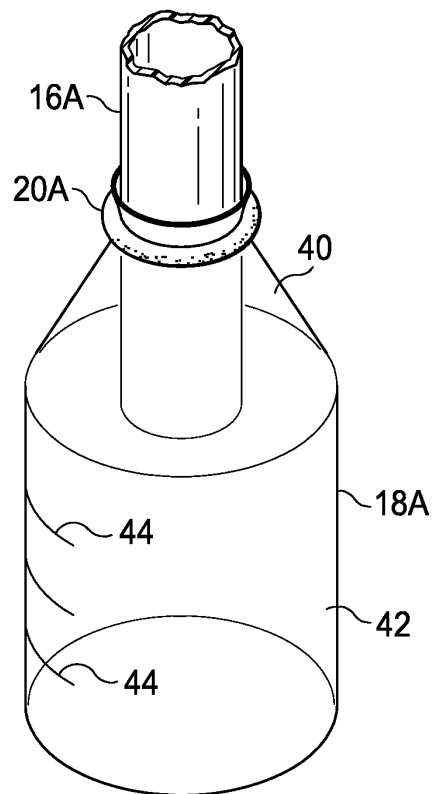


FIG. 7

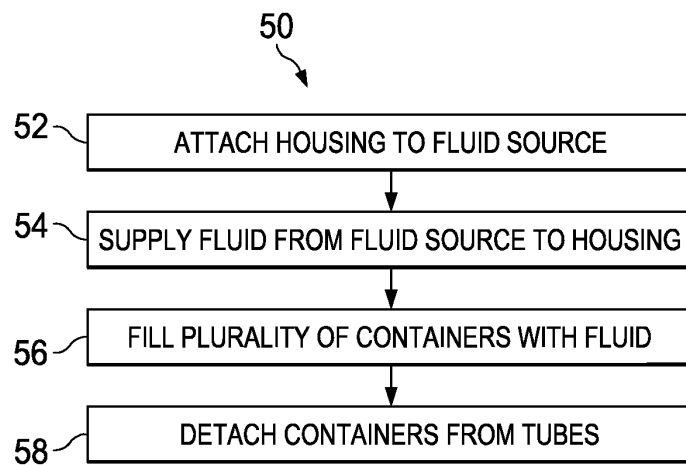


FIG. 8



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**SYSTEM AND METHOD FOR FILLING  
CONTAINERS WITH FLUIDS****CROSS-REFERENCE TO RELATED  
APPLICATIONS**

This is a continuation of and claims the benefit under 35 U.S.C. §120 from U.S. patent application Ser. No. 14/723,953 entitled "SYSTEM AND METHOD FOR FILLING INFLATABLE CONTAINERS WITH LIQUID," which is a continuation of and claims the benefit under 35 U.S.C. §120 from U.S. patent application Ser. No. 14/492,487, filed Sep. 22, 2014, which claims the benefit under 35 U.S.C. §119(e) from U.S. Provisional Application Ser. Nos. 61/937,083 and 61/942,193, filed Feb. 7, 2014 and Feb. 20, 2014, respectively, which applications are all incorporated herein by reference in their entireties.

**TECHNICAL FIELD**

The present disclosure relates generally to fluid inflatable systems and more particularly, to a system and method for filling containers with fluids.

**BACKGROUND**

Inflatable containers such as balloons can be filled with a variety of fluids, such as air, helium, water, medicines, etc. In some cases, a lot of inflatable containers may need to be filled with fluids. For example, balloons used as props in conventions, large parties, etc. may number in the hundreds and may require substantial human effort to fill them all in a timely manner. In another example, water balloons used as kids' toys may need to be filled in large numbers to aid in various games. Various methods may be employed to fill such inflatable containers. For example, an individual may blow up and tie each balloon by hand or use a tank of compressed air or helium to inflate the balloon, which then has to be tied. In another example, an individual may fill water balloons with water by hand one at a time, and then tie the balloons, which can all be quite time-consuming. Moreover, the inflatable containers may be damaged or filled to different volumes.

**BRIEF DESCRIPTION OF THE DRAWINGS**

To provide a more complete understanding of the present disclosure and features and advantages thereof, reference is made to the following description, taken in conjunction with the accompanying figures, wherein like reference numerals represent like parts, in which:

FIG. 1 is a simplified perspective view illustrating an example configuration of an embodiment of a system for filling containers with fluids;

FIG. 2 is a simplified diagram illustrating a cross-sectional view of example details of an embodiment of the system;

FIG. 3 is a simplified diagram illustrating other example details of an embodiment of the system;

FIG. 4 is a simplified diagram illustrating yet other example details of an embodiment of the system;

FIG. 5 is a simplified diagram illustrating yet other example details of an embodiment of the system;

FIG. 6 is a simplified diagram illustrating yet other example details of an embodiment of the system;

FIG. 7 is a simplified diagram illustrating yet other example details of an embodiment of the system; and

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FIG. 8 is a simplified flow diagram illustrating example operations that may be associated with an embodiment of the system.

**DETAILED DESCRIPTION OF EXAMPLE  
EMBODIMENTS****Overview**

An example embodiment of an apparatus includes a housing (e.g., casing, covering, etc. with a cavity inside) with an opening at a first end and a plurality of holes at a second end, a plurality of hollow tubes attached to the plurality of holes, a plurality of containers (e.g., receptacles, vessels, ampules, test-tubes, balloons, etc.) removably attached to the hollow tubes, and a plurality of elastic fasteners, each elastic fastener clamping each container to a corresponding hollow tube, such that when the containers are filled with fluid and detached from the corresponding hollow tubes, each elastic fastener seals each container with the fluid inside.

**Example Embodiments**

It is to be understood that the following disclosure describes several example embodiments for implementing different features, structures, or functions of the system. Example embodiments of components, arrangements, and configurations are described herein to simplify the present disclosure. However, these example embodiments are provided merely as examples and are not intended to limit the scope of the invention.

The present disclosure may repeat reference numerals and/or letters in the various exemplary embodiments and across the Figures provided herein. This repetition is for the purpose of simplicity and clarity and does not in itself indicate a relationship between the various exemplary embodiments and/or configurations discussed in the various Figures.

FIG. 1 is a simplified diagram illustrating an example embodiment of a system 10 for filling containers with fluids. System 10 includes a housing 12 removably attached to a hose 14 (e.g., tube, pipe, etc.) on a first end A and to a plurality of hollow tubes 16 on a second end B. As used herein, the term "housing" encompasses a hollow space enclosed by a rigid or semi-rigid casing (e.g., covering, skin, sleeve, sheath, etc.). In some embodiments, end A may include a threaded opening configured to mate with corresponding threads on hose 14. In some embodiments, end A may be smaller in circumference or area than end B. Hose 14 may be connected to a fluid source, such as a water tank, gas tank, water supply line, etc. on end A. End B may include a plurality of holes (e.g., configured in an array), configured to fit tubes 16. In some embodiments, tubes 16 may be permanently attached (e.g., welded, brazed, stuck with adhesives, press-fitted, etc.) to housing 12. In other embodiments, tubes 16 may be removably attached (e.g., with threads, pressure, etc.) to housing 12.

A plurality of containers 18 may be clamped (e.g., attached, fastened, held, clinched, secured, etc.) to plurality of tubes 16 using elastic valves 20. As used herein, the term "container" refers to an object that can hold something, such as fluids. The term "valve" refers to an object that regulates, directs, or controls the flow of fluids, by opening, closing, or partially obstructing passageways of fluid flow. In an example embodiment, elastic valves 20 comprise elastic fasteners, such as O-rings. In another example embodiments, elastic valves 20 comprise corrugations, smocking, elastic fibers, etc. fabricated into the necks of containers 18 such that force is required to pull open the necks of containers 18, and removal of the force causes the necks to constrict and close. In yet another example embodiment, elastic valves comprise

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internal or external plugs affixed to the necks of containers 18, through which tubes 16 may be pushed through to clamp containers 18 thereto.

Note that each of containers 18 have an opening to facilitate clamping to tubes 16 and a cavity for containing fluid. For example, one end of an example tube 16A may be fitted through a hole in end B of housing 12, and the other end of tube 16A may be inserted into an example container 18A. An example elastic valve 20A (e.g., O-ring, comprising a mechanical gasket typically in a toroid shape; elastic ring, such as a rubber-band) of sufficient size to expand and clamp around tube 16A may be disposed around (e.g., placed over) a neck (e.g., portion just below opening) of container 18A, clamping and sealing container 18A to tube 16A. Thus, elastic valve 20A may be in an open configuration when container 18A is attached to tube 16A; in elastic valve 20A's open configuration, the neck of container 18A is open, allowing container 18A to fill with fluid. After container 18A is filled with fluid, it may be removed from tube 16A, whereupon elastic valve 20A closes, thereby closing the neck of container 18A and sealing the fluid inside.

In one example embodiment, containers 18 may comprise inflatable balloons that may be filled with fluids such as water, air or helium. In another example embodiment, containers 18 may comprise flexible (e.g., stretchy, springy, etc.) elastic containers that may be filled with gaseous or liquid medications. As used herein, the term "elastic" is meant to refer to a property of a material that allows the material to resume its normal shape spontaneously after contraction, dilation, or distortion. In an example, an elastic material may be stretched to 200% of its original length, and the material may return to its original length when the stretching force is removed.

In yet another example embodiment, containers 18 may comprise flexible containers that may be filled with body fluids (e.g., urine, blood) for example, to collect multiple samples simultaneously for testing. Virtually any type and kind of fluid may be used within the broad scope of the embodiments. Note that in some embodiments, containers 18 need not be inflatable or flexible in their entireties. For example, a bottom portion of containers 18 may be inelastic (e.g., glass, plastic, metal, etc., of fixed shape and size), and a top portion may be flexible enough to be inserted around tubes 16 and clamped thereon.

When the fluid source is turned on, fluid may flow through housing 12, tubes 16 and fill containers 18. In some embodiments, when housing 12 is connected to a stream of liquid, containers 18 may be filled with the liquid. In some embodiments, the fluid may be supplied at high pressure. Virtually any mechanism that facilitates fluid flow through tubes 16 at sufficient pressure to fill containers 18 may be used within the broad scope of the embodiments. After containers 18 have reached a desired size or volume, they may be detached from tubes 16. In one example embodiment, filled containers 18 may be detached by pulling them away from tubes 16.

In another example embodiment, the connecting force holding filled containers 18 to tubes 16 may be overcome by an upward acceleration on tubes 16, for example, when they are shaken. Thus, filled containers 18 may be detached by shaking housing 12 (or tubes 16) sufficiently vigorously to cause containers 18 to fall off from tubes 16. In some embodiments, the connecting force holding filled container to its corresponding tube is not less than the weight of the filled container; in a specific embodiment, the connecting force holding each container to its corresponding tube is exactly equal to the weight of the filled container. The connecting force may be provided by a combination of constricting forces and friction forces from elastic valves 20.

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In yet other embodiments, containers 18 may fall off under gravity; for example, when filled containers 18 reach a threshold weight, they slip off tubes 16 due to gravity. The threshold weight may be based upon the tightness of elastic valves 20, friction between tubes 16 and containers 18, and force from the weight of containers 18 (among other parameters). In various embodiments, containers 14 may slide off tubes 16 and elastic valves 20 may constrict the necks of containers 18, sealing them. In some embodiments, containers 18 may be marked with volumetric measurements, and fluid flow may be turned off when the fluid has filled containers 18 to a desired volume.

In some embodiments, hollow tubes 16 may be made of a rigid material (e.g., steel, glass); in other embodiments, tubes 16 may be made of a flexible material (e.g., thin plastic). In some embodiments, tubes 16 may be thick, short and rigid; in other embodiments, tubes 16 may be slender, long and flexible. Thus, hollow tubes 16 may be flexible, semi-rigid, or rigid, based on its material of construction, design, or a combination thereof. Note that tubes 16 may be of different lengths, for example, to prevent crowding and to accommodate a larger number of containers 18 than would be possible if tubes 16 were of the same length. Thus, at least some of hollow tubes 16 may be of different lengths than the others.

Also, tubes 16 may be flexible to enable containers 18 to expand. Thus, as containers 18 fill with fluid and expand, they may push against each other, flexing tubes 16. The outermost tubes 16 may be flexed more than the innermost tubes 16 (outer and inner being in reference to a center-point of housing 12, with the inner tubes 16 being closer to the center-point, and the outer tubes 16 being farther from the center-point).

Turning to FIG. 2, FIG. 2 is a simplified cross-sectional view of a portion of an embodiment of system 10. Housing 12 comprises a threaded opening 22 at end A, an internal cavity 24, and an array of holes 26 at end B. Internal cavity 24 facilitates distributing the fluid entering at threaded opening 22 to array of holes 26 at end B. In some embodiments, threaded opening 22 may be configured for attaching to a fluid supply hose 14 (e.g., garden hose, plastic tube, etc.). In other embodiments, threaded opening 22 may be attached to corresponding threads in a valve. Array of holes 26 may be configured for connecting first ends 28 of tubes 16 by any suitable means. In some embodiments, first ends 28 of tubes 16 may be connected to corresponding holes 26 by compressing or gluing. In some embodiments, a number of holes 26 in housing 12 and a number of tubes 16 can correspond to a number of containers 18 that are desired to be filled and sealed substantially simultaneously.

To clarify further, only one example tube 16A is shown in the figure. A first end 28A of tube 16A is fitted through a corresponding hole 26A in housing 12. A second end 29A of tube 16A is inserted into container 18A. Elastic valve 20A may be placed around the neck of container 18A clamping the neck to tube 16A. An internal volume 30A of container 18A may be filled with fluid appropriately.

To fill and seal containers 18, housing 12 may be attached to a fluid supply tube (e.g., garden hose) and the fluid supply may be turned on. The fluid enters housing 12, is distributed to holes 26, travels down tubes 16, and fills containers 18. Containers 18 may be filled and may expand substantially simultaneously. When containers 18 have reached a desired size and/or they are filled with the desired volume of fluid, they may be removed from tubes 16. They can be removed by falling off, by shaking them off, by pulling them off by hand, etc. As each container 18A is removed from corresponding

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tube 16A, respective elastic valve 20A may constrict and close the neck of container 18A, sealing it with the fluid inside.

Turning to FIG. 3, FIG. 3 is a simplified diagram illustrating example details of a valve 31 that may be attached between hose 14 and housing 12 according to an embodiment of system 10. One end of valve 31 may be attached to hose 14 and the other end may be attached to threaded opening 22 of housing 12 (e.g., using threads). A lever 32 may be turned from one side (of valve 31) to another (e.g., as indicated by arrow C) to turn on and turn off fluid flow to housing 12. For example, to turn on the fluid flow, lever 32 may be turned to a first position; lever 32 may be turned to a second position (e.g., different from the first position) to turn off fluid flow.

Turning to FIG. 4, FIG. 4 is a simplified diagram illustrating example details of an embodiment of system 10. Housing 12 may be attached to a spigot 33 (e.g., nozzle, faucet, outlet, etc.) that connects to the fluid source. Spigot 33 may be turned on or turned off to start or stop fluid flow to housing 12.

Turning to FIG. 5, FIG. 5 is a simplified diagram illustrating example details of an application of an embodiment of system 10. Embodiments of system 10 may be used in a variety of applications, such as for collecting numerous blood samples substantially simultaneously. Blood 34 may be drawn from a human (or animal) and blood 34 may collect substantially simultaneously in plurality of containers 18. The substantial simultaneous collection of blood in such manner can ease patient pain, speed up sampling time, and enable taking multiple samples substantially simultaneously without cross-contamination from one container to another or messy transfers between containers.

Turning to FIG. 6, FIG. 6 is a simplified diagram illustrating example details of an application of an embodiment of system 10. Embodiments of system 10 may be used in a variety of applications, such as for collecting numerous urine samples substantially simultaneously. Urine 36 may be drawn from a human (or animal) through a suitable catheter 38, and may collect substantially simultaneously in plurality of containers 18.

Turning to FIG. 7, FIG. 7 is a simplified diagram illustrating example details of an embodiment of system 10. Example container 18A may comprise a flexible portion 40 and an inflexible portion 42. Flexible portion 40 may be clamped on to example tube 16A using example elastic valve 20A. In some embodiments, container 18A may comprise volumetric measurement markings 44. When fluid fills container 18A to a desired volume, for example, as indicated by volumetric measurement marking 44, container 18A may be detached from tube 16A, whereupon elastic valve 20A may close container 18A, sealing the fluid inside.

Turning to FIG. 8, FIG. 8 is a simplified flow diagram 50 illustrating example operations that may be associated with an embodiment of system 10. At 52, housing 12 may be attached to a fluid source (e.g., through hose 14, spigot 33, etc.) At 54, fluid may be supplied from the fluid source to housing 12. At 56, plurality of containers 18 may be filled with the fluid. At 58, containers 18 may be detached from corresponding tubes 16.

Note that in this Specification, references to various features (e.g., elements, structures, modules, components, steps, operations, characteristics, etc.) included in “one embodiment”, “example embodiment”, “an embodiment”, “another embodiment”, “some embodiments”, “various embodiments”, “other embodiments”, “alternative embodiment”,

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and the like are intended to mean that any such features are included in one or more embodiments of the present disclosure, but may or may not necessarily be combined in the same embodiments.

The elements described herein may be made of any suitable materials, including metal (e.g., stainless steel, copper, brass, bronze, aluminum, etc.), plastic, glass, elastomers, or any suitable combination thereof. Each element may also be made of a combination of different materials (e.g., housing and tubes may be made of plastic and containers may be made of elastic rubber; housing and tubes may be made of stainless steel and containers may be made of a combination of glass and flexible plastic; etc.). Any suitable material or combination of materials may be used for the components described herein without departing from the broad scope of the present disclosure.

In addition, the shapes shown and illustrated in the various FIGURES are for example purposes only. Various other shapes may be used herein without changing the scope of the present disclosure. For example, housing 12 may be conical, cylindrical, pyramidal, etc., without departing from the broad scope of the embodiments. Likewise, tubes 16 may be rigid, or flexible 18 without departing from the scope of the broad embodiments.

While the disclosure references several particular embodiments, those skilled in the art will be able to make various modifications to the described embodiments without departing from the true spirit and scope of the disclosure. It is intended that all elements or steps which are insubstantially different from those recited in the claims but perform substantially the same functions, respectively, in substantially the same way to achieve the same result as what is claimed are within the scope of the disclosure.

What is claimed is:

1. An apparatus comprising:

a housing comprising an inlet and a plurality of outlets; a plurality of hollow tubes, each hollow tube attached to the housing at a respective one of the outlets;

a plurality of containers, each container removably attached to a respective one of the hollow tubes; and

a plurality of elastic fasteners, each elastic fastener clamping a respective one of the plurality of containers to a respective tube, and each elastic fastener configured to restrict detachment of its respective container from its respective tube and to automatically seal its respective container upon detachment of the container from its respective tube, the restriction of each elastic fastener being sufficiently limited to permit its respective container to detach from its respective tube upon one or more of (1) at least partially filling the container with fluid and (2) shaking the housing;

wherein the apparatus is configured to fill the containers substantially simultaneously with fluid; and

wherein at least first and second ones of the plurality of containers are disposed sufficiently close to each other such that they press against each other, regardless whether the first and second ones of the plurality of containers are in a filled state or an unfilled state.

2. The apparatus of claim 1, wherein the apparatus is sufficiently compact to be operated while being held by hand of a single operator.

3. The apparatus of claim 1, wherein each container is a water balloon.

\* \* \* \* \*

**CERTIFICATE OF SERVICE**

This is to certify that this day the foregoing document was served via the Court's CM/ECF system on counsel of record.

Dated: July 6, 2017

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**CERTIFICATE OF COMPLIANCE**

I hereby certify that this brief complies with the type-volume limitations of Federal Rule of Appellate Procedure 32(a)(7)(B) and the Rules of this Court because the foregoing brief contains 12,998 words (excluding the parts of the brief exempted by Federal Rule of Appellate Procedure 32(a)(7)(B)(iii) and by Federal Circuit Rule 32(b)).

I further certify that this brief complies with the typeface requirements of Federal Rule of Appellate Procedure 32(a)(5) and the type style requirements of Federal Rule of Appellate Procedure 32(a)(6). This brief has been prepared in a proportionally spaced typeface using Microsoft Word in Times New Roman 14-point font.

Dated: July 6, 2017

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